

BMUG

FALL '97 NEWSLETTER

OS 8: ALL YOU NEED TO KNOW

APPLESCRIPT WIZARDRY

PHOTOSHOP 4

REPETITIVE STRESS PREVENTION

NISUS WRITER 5

EYE CANDY



ON-LINE VERSION

The BMUG Newsletter

Fall 1997 – Volume XIII, No. 2



BMUG, Inc.

1442A Walnut Street #62
Berkeley, CA 94709-1496

Phone (510) 549-2684
Fax (510) 849-9026

The BMUG Office is located at:
2055 Center Street, Downtown Berkeley

NEWSLETTER ARTICLE SUBMISSIONS

BMUG accepts Newsletter article submissions all year round. If your submission is published you will receive a six-month membership to BMUG.

Submissions can be in any common word processor format, but Microsoft Word version 5 is preferred. For article guidelines see the folder on the Newsletter CD-ROM, the Newsletter conference on Planet BMUG, BMUG Boston, or BMUG's forum on America Online. Submissions should have minimum styles; italics and bolds are fine. All submissions should be made electronically (via email or disk). The deadline for the Spring 1997 issue is May 1, 1997.

Send submissions to: BMUG Inc. Newsletter Submissions, 1442A Walnut St. #62, Berkeley, CA 94709-1496.
Or email them to: publisher@bmug.org

Please do not contact vendors for review copies of products as a BMUG representative or associate. If you are interested in reviewing something you do not own, please feel free to contact BMUG. Read the following review and evaluation policy for further information.

REVIEW AND EVALUATION POLICY

In order to avoid misrepresentation, manufacturers should send evaluation products *only* to: BMUG Inc., Attn: Newsletter Reviews, 1442A Walnut St. #62, Berkeley, CA 94709-1496. No hardware or software should be mailed to any individual's address. BMUG cannot be responsible for any products not directly sent to our office.

Please remember that we publish once every six months (released during the Macworld Expos in San Francisco and Boston) and that our evaluations are based on individual's experiences with both your product and your company. You should realize that uncompensated user reviews can often be honest and harsh. Not all products sent to us will be able to be reviewed.



*BMUG Newsletter, Fall 1997
Volume XIII, Number 2
Copyright ©1997 BMUG Inc.*

**This BMUG Newsletter is
printed on recycled paper.**



All rights reserved. All articles are copyrighted by their respective authors and reprinted by their permission only.

*The BMUG Newsletter is published twice a year by BMUG, Inc., a 501(c)3 non-profit, educational corporation.
Our mailing address is 1442A Walnut St. #62, Berkeley, CA 94709-1496. (510) 549-2684.*

*Articles and editorial material should be submitted to:
Newsletter Editor, BMUG, Inc. 1442A Walnut St. #62, Berkeley, CA 94709-1496. We will not be able to return submitted materials.*

Software, procedures, and other published material herein is offered "as-is" without any warranty, expressed or implied by the publisher and authors. Use at your own risk. Publisher and authors are not liable for any loss resulting from the use of published materials.

The BMUG Newsletter, PD-ROM, and TV-ROM are trademarks of BMUG, Inc. All software and hardware mentioned in this issue are trademarks of their respective companies.

ISBN 0-201-68889-1

*Distributed to the book trade by:
Peachpit Press
2414 Sixth Street
Berkeley, CA 94710
(800) 283-9444 or (510) 548-4393
(510) 548-5991 (fax)
www.peachpit.com*

Peachpit Press is a division of Addison Wesley Longman.

THE BMUG NEWSLETTER

FALL 1997 EDITORIAL & PRODUCTION STAFF

Editor-in-Chief/Abby Andrews-Slonaker
 Senior Editor/Kelly Pernell
 Editing Coordinator/Karen Lee-Tung / Abby Andrews-Slonaker
 Choice Products/Bob Thyken
 CD-ROM Preparation/Arthur Lau
 Cover Art & Layout/Abby Andrews-Slonaker
 Editing Script and Conversion script for Choice Products/Richard Pfeiffer

JAPAN NEWS SECTION (JNS)

JNS Staff/Takashi Noguchi, Kawori Ito
 Staff Emeritus/Rio Hashimoto
 JNS Translation/Rio Hashimoto, Atsushi Ryu, Yuichi Uzawa,
 Yukoh Hirano, Yoshy, Tetsuya Baden, Atsushi Ryu
 JNS CD-ROM Staff/Takashi Noguchi, Satoshi Furuno, Takao Matsuda, Akira Sasaki

LANGUAGE SECTION

Coordinator, Editor/Megan Lynch

EDITORIAL VOLUNTEERS

*Gretchen Brewer, Jen Brown, Jazz Duberman, Garold M. Gibson, Ron Hunsinger,
 Mark Mason, Sam Penrose, Kelly Pernell, Emeline Mann Sanchez, Aubie Schmidt,
 Zach "I hate StuffIt files" Teitler, Karlene Lee-Tung, Ann M. Wrixon, Lionel Yang, Heather Jones.*

PROOFREADERS

*Allison M. Alexandra, Charles Baker, Carol Baumeister, Nancy A. Gagnon, Jamie Gedigian, Dave Granquist,
 Carolyn A. Hendricks, Tim Holmes, Heather Jones, Adam Louti, Michael Lyons, Kate McKinley, Sam Penrose,
 Kelly Pernell, Estelle C. Raderman, Emeline Mann Sanchez, Ann M. Wrixon*

CORPORATE SPONSORS:

APS
 US Robotics
 Microsoft Corporation
 Softarc
 TechWorks
 Vizsoft
 Keyspan

BMUG would also like to thank Panamax for their donation of excellent surge protectors, Meridrew for their donation of cases of Klear Screen, Gryphon Software for BatchIt, MacHome Journal for their support and many, many more vendors for their support this year.

This Newsletter is printed on 45 lb. Husky recycled smooth paper,
 by Consolidated Printers, Inc. located in Berkeley, California.

Layout styles by Hans Hansen, et al.

THE BMUG STAFF

Carol Cantwell, *Accounting Asst.*
Catie Branwyn Fuld, *Office Assistant*
Lisa Gonzales, *Database Manager*
chris r. harris, *Planet BMUG Administrator*
Arthur Lau, *Disk Librarian*
Sheila Sondik, *Accountant*

Abby Andrews-Slonaker, *Publications Manager*
Colleen Miller, *Development Director*
Sean O'Connor, *Public Outreach Coordinator*
Kelly Pernell, *Volunteer Coordinator*
Gerald Raddatz, *Auxiliary Support*
Ann Wrixon, *Executive Director*

MEMBERSHIP CONTRIBUTIONS

SATELLITE CLUB MEMBERS

Cesar Barcenas
Ted R. Hooker
Ronald A. Hunsinger
Michael Killingsworth
Ted VanDuyne

HERO MEMBERS

Bernard Aboba
Allan R. Andrews
Brian Baer
Nancy Barrows
Warren Bingham
Donna Blochwitz
Glenn Bookout
David Brockman
Scott Brown
Gretchen Burke
Timothy Carlton, M.D.
John Celona
John Chatham
Ron Ciabattari
Kenneth Cohen
Robert Corbett
Sara Crane
Bruce DeBenedictis
Rico J. Delodovici
Arthur V. Dieli
Carl DiGiorgio
Bernie Drouillard
T.R. Ellass
C. P. Fernandez
Roy Francesconi
E. Bond Francisco
Cynthia Gentry
Jason Goldstein
James Grace
Jack Gratteau
Warren Harrell
Norman Harris
John F. Hayes
Lynn Heltman
Jim Henderson
Susan Higgins
John Hightower

Mark Hoff
Jason A. Howarth
Dan Hubbard
Jeffrey D. Hume
Robert Huntington
Steve Jacobson
Edward Jarvis
Harold Jensen
Andrew Johnson
Ken Kampman
Jan Kennedy
David Kopf
Paul Lennie
Corey Levenson
Theodore Lindberg
Martha Luehrmann
Felipe Lujan-Bear
Mark Lundein
Neil Maller
Evan Marquit
Giles McNamee
John P. McWilliams
Edward Meenen
Denzil Meyers
Jim Miller
Jane Monsson
Wayne Montoya
James T. Moran
Norval Mortensen
John Motamed
Jim Mullin
Nick Murdock
Laura Murra
Fred Neeper
William New
Morris Newman
David & Mary Nicely

Michael Odawa
Stephen Orbach
Norman Pease
David Pratt
Cecilia M. Preston
Chuck Purvis
Bob Pynenburg
Maxine Ray
Betsy Raymond
Joseph Readdy
Ed Rodriguez
William K. Rohwedder
David Roth
Pierre Sagot
Mark Sandrof
Donald Scaggs
Richard Schellinger
Clinton H. Schemmer
Robin Seer
Koichi Semba
Janice Smyth
William Sprague
Mervin Stewart
Mark Sugihara
Hiroshi Sugiura
Craig Sutherland
Laurence Taylor
Larry Tessler
Joel Tobias
Robert Trimble
A. Bruce Ulmer
Michael Vincenc
David Wentroble
Dana Wheeler
Marty Yanes
Lin Zenki

BMUG SUPERHEROS

As a nonprofit organization BMUG provides a variety of services that are free to the community.

BMUG members also donate computers for placement in the homes of low-income families. To support these efforts BMUG members have contributed to the BMUG SuperHero Fundraising Drive. THANK YOU to all of the BMUG SuperHeros listed below:

Anonymous (1)

Anonymous members of the BMUG Board of Directors (2)

Jay Broadwell

Robert Paul Corbet

George Dees

Michael Patrick Ellard

Kevin Fox

Charles Gousha

Eric Gundrum

Tim Holmes

Mitch Huitema

Stephen Howard

Harriet Hungate

Ron Hunsinger

Guy Kawasaki

Steven Malamuth

Evelyn Mann

Michael McMillan

Dan Meriwether

Judith Meskill

Alan Miller

Scott Robinson

Mark a. Salser

Tom Shanks

Nancy Steinhaus

Fred Swan

Cliff Stoll

A special thank you to our many members who have made matching or other donations to help BMUG's Fundraising Drive. If you are interested in participating in the BMUG Superhero program please call the office for details. BMUG Superheros may either receive a lifetime membership or take a tax deduction for their contribution.

THE VOLUNTEERS OF BMUG

BMUG BOARD OF DIRECTORS

Carol Cantwell, *Staff Representative*
Michael Patrick Ellard, *Treasurer*
Carol Haberberger
Bruce Linde, *Alternate*
Peter Linde, *Chair*
Lynn Rubin
David Schnider, *Secretary*
Bob Thyken

EXECUTIVE MANAGEMENT TEAM OF BMUG BOSTON

Roz Ault
Tom McGee
Cathy Rudolph
Becki Sherman

EXECUTIVE MANAGEMENT TEAM OF BMUG JAPAN

Satoshi Furuno
Yasuichi Kitamura
Designer of BMUG Japan logo:
Shinichi Urabe

OTHER BMUG VOLUNTEERS WE HAVEN'T MENTIONED YET...

Peter Adler
Ed Allen
Beverly Angros
Carl Anderson
Kazuo Anma
Sumio Araki
Graham Arlen
Jonathan Arthur
Paul Attinello
Mike Ault
Charles Baker
Brad Ball

Francis Barker
Carol Baumeister
Sarah Beach
Scott Beamer
Jensen Beeler
Sheila Bell
Thomas Benner
Steve Berchtold
Howard Berman
David Biasotti
Marc Bjorkland
Brandon Bloom

Steve Boemor
Glenn Bookout
Jason Borovick
Doug Bourquin
Steven Brett
Jay Broadwell
Andy Brooks
Travis Bushman
Ron Butchko
Ricardo Canepa
Dan Capling
Michele Carpenter

Alan Carroll
Beth Carroll
John Charles
Earl Christie
Ian Clydesdale
Raines Cohen
Joseph Coleman
James Conklin
Paul Constantinou
Sarita Cordell
Patricia Corrigan
Les Cowan

Karen Coyle	Brent Hecht	Jim McKee	Derrick Schneider
Ian Crew	David Hedges	John McKee	David Schwartz
Ian Cumming	Jim Henderson	Dennis McManamon	David Scribner
B. Dang	Ron Hipschman	Michael McMillan	Toru Sekimoto
Frank Dang	Tsutomu Hirosaki	Ed Mechem	Steve Semple
Herb Dang	Ilene Hoffman	Dan Meriwether	Ira Seskin
Sidney Davenport	Chris Holmes	Kenji Mizoguchi	Gray Shaw
Dale Davis	Stephen Howard	Tetsuya Mizutori	Jack Sheehan
Bruce DeBenedictis	Mitch Huitema	Roy Morales	Paul Shoemaker
Pierre Deligant	Ron Hunsinger	David Morgenstern	Aaron Siegel
Joel Diamond	Robert Huntington	Leonard Morgenstern	Charles Silverman
Lawrence Diggs	Masaru Iida	Tadashi Murohashi	Nobuyosi Simizu
Dennis Dimick	Nat Irons	Izumi Nara	Randy Singer
Ted Dively	Tatsuya Izukawa	Andy Neuschatz	Jean Sirius
Tsuneki Doi	Daniel J. Wallace	Nick Nicholas	Bill Sistek
Greg Dow	Matthew J. Endo	Pam Niedermayer	Sarah Smiley
Ivan Drucker	Mark Jefferson	Bill Nolan	David Smith
Gene Duckart	Yoshitsugu Kakemoto	Craig O'Donnell	Darren Smith
Jay Dunkelman	James Kalin	Rika Obata	John Smith
Brian Dunlap	Keisuke Kameyama	Sam Oppenheim	Rodney Smith
Rick Eisner	Antje Kharchi	Bob Ostwald	Martin Snapp
Karl Eklund	Tetsuo Kikuta	Perry Paolantonio	Danny Snyder
Bob Elling	Don King	Kessel Parker	Jeff Songster
Martin Fabian	Dong-Gyom Kim	Gordon Perry	Bob Soron
Mike Fenwick	Steven Klinke	Richard Pfeiffer	Joyce Steinlauf
Mike Ferguson	Dan Kogai	Dennis Piechota	Judith Stern
Michelle Ferris	Vance Koven	Owen Pietrokowsky	Cliff Stoll
Ruth Fontana	Nick Kratz	Mark Pincot	Hiroshi Sumio
Dee Forsythe	Tony Laidig	Gilles Poitras	Toshio Suzuki
Brian Foster	Marc Lander	Deborah Pulliam	Fred Swan
Bill Fox	Simen Lange	Estelle Raderman	Yukiko Takiguchi
Kevin Fox	Nick Lauriat	Dennis Rae	Harumi Tanabe
Fred Freeman	Ben Lee	Stephen Remillard	Cheryl Taniguchi
Stu Fried	Bernie Lenhoff	Benjamin Riggs	Zach Teitler
Shoshana Friedman-Hawk	Kevin Lesniewicz	Nicholas Riley	Stan Troutner
Ken Fromm	Robert Lettieri	Kathy Ritter	Daniel Wallace
Ari Garboos	Morgan Linton	Krehe Ritter	David Walsh
Jamie Gedigian	Egan Loo	Roy Robinson	June Watanabe
Bill Gerber	Adham Loutfi	Scott Robinson	Ben Weiss
Jim Gleckner	Steve Lukrofka	Bob Rosas	Max Wentler
Howard Goldberg	Eve Lurie	Mary Rose	Linda Wiggins
Jason Goldstein	Neil Maller	Lynn Roseborough	Keith Wilkinson
Noel Gouveia	Emeline Mann Sanchez	Glenn Rosen	Alan Wood
Dave Granquist	Joris Martin	Amy Rothstein	Chris Wood
Lorca Hanns	Mark Mason	Alan Rubin	Vedder Wright
Jeannene Hansen	Jeff Matsushita	Mark Ryken	Greg Yahna
Dianne Harris	Jeff Mayes	Noah Salzman	Patricia Yarrow
Duane Harris	Kadari Mayson	Irene Santos	Jason Yeatman
Karin Hart	Kadori Mayson	Kevin Savetz	James Yee
Gunthar Hartwig	Lee McCanne	Jun Sawada	Naoko Yokote
David Hauer	Sidney McClory	Jim Scanlon	Linda Yup
John Hayes	Eleanor McGrath	Chuck Scheffreen	<i>and many others...</i>

DEDICATION

Last year when BMUG began its Computer Placement Program for low-income families there was widespread concern about who would test, fix, and retest the dozens of computers that started pouring into the office. The answer quickly came in the form of one of our most dedicated volunteers. This Newsletter is dedicated to Ian Cumming who has taken on the role of dedicated head of computer refurbishing. His efforts have resulted in dozens of families, and several nonprofits receiving Macintosh computers from the BMUG Computer Placement Program. This is no small task. Ian tests every computer and modem that comes in the door. He also rebuilds computers so that from several broken computers emerge one fully functioning machine.

Ian's efforts on behalf of the Computer Placement Program alone would have garnered him the honor of this dedication, but his other volunteer efforts for BMUG should also be acknowledged. He often helps facilitate the BMUG Main Meeting on Thursday evenings at our Berkeley office where he is the featured "computer genius" in a special section of the meeting titled "Stump the Ian." During this part of the meeting BMUG members try to find a Mac question that Ian is unable to answer. Needless to say this is an almost impossible task. Ian handles all of the questions with good humor and deadly accuracy.

One of Ian's greatest strengths is his willingness to help no matter what the task. Ian has helped with everything from cleaning the office to Saturday Helpline appointments, to setting up and maintaining the network during our Marathon-a-thon fundraiser.

Clearly BMUG values Ian for his technical know-how, but it is his ability to share this information with generosity and good humor that make him well loved and cherished at BMUG.

This dedication is just one small way we can show our appreciation to Ian for his efforts on behalf of BMUG.

A SPECIAL THANK YOU TO APS TECHNOLOGY, DANTZ DEVELOPMENT, AND U.S. ROBOTICS

As a nonprofit computer user group BMUG has accepted donations from many companies who recognize the importance of user groups. Although BMUG does not accept advertising of any sort, we do quietly thank our corporate sponsors. Recently, however, APS Technologies, Dantz Development and U.S. Robotics provided us with such important and timely help that BMUG would like to extend to them a special thank you.

On June 22, 1997 Planet BMUG, our electronic bulletin board system (BBS), suffered a major failure, resulting in our being off-line for 72 hours. Although an inconvenience to our membership we took advantage of this downtime to do a major upgrade of Planet that we had originally planned for August 1997.

An upgrade of this magnitude in just 72 hours would not have been possible without the quick response of APS Technologies, Dantz Development, and U.S. Robotics all of whom delivered equipment or software to our office within 48 hours. APS provided a 4 gig hard drive, Dantz Development provided the most recent update of their backup software Retrospect, and U.S. Robotics provided ten 56K modems.

Thank you to our corporate sponsors who made the Planet BMUG upgrade possible, and to our membership who patiently waited for us to get back on-line.

PLANET BMUG • BMUG BOSTON • BMUG JAPAN

BMUG ONLINE MEMBERSHIP SERVICES

PLANET BMUG BBS: 510-849-2684 • BOSTON BMUG BBS: 617-275-3062 • JAPAN BMUG BBS: 0423-59-7116

One of the privileges of BMUG membership is access to our online community of over 6000 BMUG members.

Planet BMUG, our Berkeley-based BBS, BMUG Boston, our sister BBS on the East Coast, and BMUG Japan, our sister BBS across the Pacific Ocean, features over 35 lines and hundreds of popular conferences. All three BBSes are also now available via TCP/IP for those members with an Internet Service Provider.

SO WHICH BBS SHOULD I USE?

BMUG members can opt to use the BBS of their choice, but not more than one. Although many of the conferences are gatewayed (mirrored), each BBS has its own style. We suggest you use whichever will be kindest to your pocketbook.

HOW TO GET ONLINE WITH A BMUG BBS VIA MODEM:

Complete instructions for creating and using your BMUG BBS account can be found in the article called "How To Get Online with BMUG," at the beginning of the Telecom section in this Newsletter. In the meantime, here are the basics:

1. You get the FirstClass Client; SoftArc:FirstClass Client; FirstClass Client software when you join BMUG either via a floppy disk or via the Newsletter CD-ROM.
2. Launch the FirstClass application and modify the settings file for your modem, add the BMUG BBS phone number, and type in a UserID and password (you make these up yourself). Be sure to remember them.
 - The Client software comes with the modem settings files for most modems. You can select yours from the pop-up menu of modem types.
 - Be sure you have the correct phone number for the BBS you've selected, and remove the area code if you don't need it to reach the BBS.
3. Once you've configured and saved your settings file, click the Login button, and it will dial the BBS for you.

4. Once connected, fill out the auto-registration screen that greets all new users. You don't get that much time to fill it out, so please fill it out quickly and completely. Oh—and make sure you use the same information you gave us when you joined BMUG. When you're ready, hit the Register button.
5. Now that you're online, find your way to the Request Validation folder (on the Desktop), open it, and create a new message requesting validation (for the account you just created). You can create a new message by typing Command-N, and send it by typing Command-E.
6. It will take the Validation Volunteers a few days to check your request against our database of members. In the meantime you'll have 25 minutes a day to look around.
7. If you have any problems along the way, check the Tips on the following pages, check the article in the Telecom section of this newsletter, or call the BMUG Helpline at (510) 540-1742 and follow the instructions for pre-recorded BBS hints and tips.
8. Have fun!

INSTRUCTIONS FOR LOGGING ON TO A BMUG BBS VIA THE NET:

Complete Instructions for logging onto Planet BMUG, BMUG Boston, and BMUG Japan via the Net can be found in the articles "Getting Online with BMUG Boston" and "How to get Online with BMUG via TCP/IP" at the end of the Telecom section in the Newsletter. In the meantime here are the basics:

1. Make certain you are using FirstClass Client 2.6 or higher for Macintosh or Windows. Only version 2.6 and up support IP connections. Version 2.7 for Mac and 3.0 for Windows are recommended.
2. Make certain your connection to the Internet is a PPP, SLIP, or better connection from a service provider with full-time Internet access. "Internet access" offered by online services such as America Online will not work.
3. Make a new copy of your FirstClass settings file for Planet BMUG, BMUG Boston, or BMUG Japan. From the first screen, click on the "Setup" button and make these changes: First, substitute the appropriate IP address in the Server field of the connection setup window. The IP

address for Planet BMUG is: bmug.org or 206.80.36.91; for BMUG Boston: bmugbos.org or 198.69.254.236 for BMUG Japan: bmug.crl.go.jp or 133.243.99.253. Choose TCP-IP.FCP as your connection method.

4. With the connection setup window still open, press the Setup button beside the "Connect via" popup. On the next screen click on "Advanced Settings" and check the TCP port number. Change it to 3004 (it's 3000 by default). Save your changes. Make sure you click Save after you change the settings. If the port is left at 3000 (the default), the server will not allow you to log on to either Planet BMUG, BMUG Boston, or BMUG Japan.
5. Initiate your local Internet connection. Once connected, press the Login button on the FirstClass Login screen. You will be connected to the site if there are ports available. The performance you experience will depend on the bandwidth of your Internet connection and network traffic conditions.

Frequently Asked BBS Questions: BMUG Boston

by Roz Ault, BMUG Boston Co-administrator



1. Is BMUG Boston's BBS an exact mirror of Planet BMUG in Berkeley?

No. We share many (but not all) conferences, and the file areas are completely different. Of course, we have many of the same files online, but all the Boston files are uploaded locally.

2. So, if I have an account on Planet BMUG, can I get one on BMUG Boston, too?

The only way to have an account on both BMUG systems is to buy an extra BMUG membership. BMUG has to pay SoftArc a license fee for every BBS account, so only one account comes with each membership. Please don't create an account on BMUG Boston if you already have a Planet account, unless you want to cancel your Planet account (or buy a second membership).

You can log on to Boston just to look around, but your account won't have email or download privileges—and will be deleted at the end of the day.

3. Why is it sometimes hard to get on to BMUG Boston?

If it's Sunday morning, you often won't get a connection, because the system may be offline for backup. It's almost always up again by mid-afternoon.

Other times, if you're dialing in and get a busy signal, it probably just means all the lines are busy. Keep trying, or call back later.

If you're having problems getting in via the Internet, the bottleneck is most likely with your Internet Service Provider (ISP), or somewhere along the Net route. You can try dialing in via modem to make sure the BBS is up and running.

4. What are the modem numbers for BMUG Boston?

BMUG Boston phone numbers in hunting order are:

- (617) 275-3062
- (617) 275-3063
- (617) 275-3064
- (617) 275-3065
- (617) 275-3066
- (617) 275-3067

All modems are 28.8 kbps.

Incidentally, if Boston-area folks want to call the modem lines (rather than accessing the BBS via the Internet), you should check

5. Can I get on to the Internet from BMUG?

6. When I tried to connect to BMUG Boston over the Internet, I was told that I didn't have permission to connect via TCP and that I must use a modem. Why?

TCP-IP

Protocol: TCP-IP

Advanced Settings: TCP Buffer: 10000 TCP Port: 2004

Trace: ☐ Receive ☐ Send ☐ Errors ☐ Connect ☐ Modem/Startup

Window: Auto Lock: None Encrypt: On

Connect via:

- AppleTalk.FCP
- CTB Modem Tool.FCP
- Modem.FCP
- Serial.FCP
- TCP/IP with FCP**
- TCP/IP FCP

Setup...

A screenshot of a Windows 95 desktop environment. The taskbar at the top shows the 'Start' button and several open applications: 'Command Prompt', 'QIP', and '7-744'. The desktop contains several icons: 'Internet Explorer', 'Outlook', 'Classical AOL', 'CompuLink', 'Hippo Mail', 'Internet News', and a folder named 'Entertainment'. The 'Entertainment' folder is highlighted with a large oval.

8. How do I send a message to an Internet address from BMUG Boston?

To: friend@somewhere.com,UUCP

thomas_jefferson@bmugbos.org

9. How often does Internet mail get delivered?

12



Figure 4. What you see when you open the ConferenceIndex folder- an alphabetical listing of all major messaging areas on BMUG Boston.



Figure 5. Making an alias of a highlighted folder so that it will appear on your desktop.



Figure 6. Sample message addressed to someone on the internet

News folder.

Note that we have no control over the Internet mail once it leaves our system. You can check the history of a message to see if it has been routed, but you can't find out whether the person on the other end has actually received it. Usually if the address is not deliverable, you will get a notice back in your mailbox.

The Internet newsgroup messages are transferred mostly at night or early morning to save money.

10. Am I allowed to use file transfers or mailing lists over the Internet?

No. BMUG's Internet gateway is for person-to-person correspondence only. File transfers are not supported, and subscribing to mailing lists is prohibited.

The reason for this is that the FirstClass architecture bogs down under the volume of messages received from most mailing lists. BMUG does subscribe to some mailing lists that are of general interest to many of our members, and posts them in a public area for everyone to read.

As for file transfers, FirstClass doesn't handle them well, and attached files often crash the Internet gateway, meaning that no mail can get in or out. If you try to send a message with a file attachment, it will never leave BMUG Boston. You can paste up to 32K of text into any message.

11. How do I send mail to a member of Planet BMUG?

Enter the person's name in the To: field and add a comma and the words Planet BMUG afterwards. For example, to send mail to Ada Lovelace on Planet BMUG, address the message to:

Ada Lovelace,Planet BMUG

If you use a name that is not in the directory at Planet BMUG, you will get a message telling you that the mail was not deliverable.

Note that we don't normally allow file attachments on messages going to Planet. If you need to send a file to someone on Planet, please send a message to Administrator first.

12. How long does BMUG Boston keep messages on the system?

Most private messages are automatically deleted from BMUG Boston after 21 days. Public messages in conferences are kept for different amounts of time; the average is between 14 and 30 days. (Note that BMUG Boston can keep messages for a longer period of time than Planet BMUG because we have a smaller number of users, so the total number of messages on the system is not so large.)

13. How come the flag was up on my mail-

box, but no messages were inside?

If you don't log on for more than three weeks, you may see a red flag on an empty mailbox. That means you did have messages, but they were removed by the automatic "trash collector."

You can help us keep the system running smoothly by regularly deleting from your mailbox messages you have finished reading, as well as the copies of messages you sent. This is important because FirstClass does not use disk space efficiently, and too many old messages can overload the server and eventually cause crashes.

You can save any messages you want to keep on your own hard drive; just open the message and Save from the File menu (Figure 7).



Figure 7. The save command on the message menu.

To delete old messages, you'll need to be sure that Show only Unread Messages is not checked in your preferences. You can view and change your preferences by choosing Preferences from the Edit menu in FirstClass. (See Figure 8.)

14. I can't use mail forwarding, and I'm not able to set my preferences to automatically forward or respond to my mail. Why?

We have turned off mail forwarding and auto-reply because they eat up lots of disk space and are potentially hazardous to the health of a server with our volume of mail. If you want to send a copy of a message to someone else, you can copy and paste the text into a new message.

15. Why did the BBS treat me as a new user, when I already have an account?

You probably haven't used your account for a long time, and it expired. You have to log on at least every 120 days, or the system will delete your account.

Possibly you entered the wrong user ID or password. Be sure you write down your user ID and password in a safe place, so you don't have problems logging on if your settings file is lost or corrupted.

16. If I'm looking for a specific file, how do I find it? Searching doesn't seem to work.

Unfortunately, we had to disable searching through the File area as a whole, since it slows down the system so much for everyone else online. You can search within individual folders. If it's a new file, search the New Uploads folder (see Figure 9). Otherwise, try to figure out which subject area it would be in, and search in there.

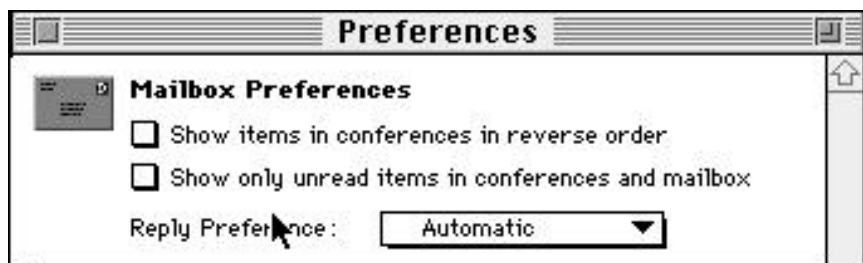


Figure 8. The preferences window. Don't check "Show only unread" when looking for old mail.

If you still can't find what you're looking for, post a message in the File Talk/Requests folder and ask for help.

For more information, please check the News folder, and the BBS Help Desk (Figure 10) on your FirstClass Desktop. You can post questions about using the BBS in the Help Desk folder. For general help with problems about software, hardware, or modem connections, please use one of the computer conferences (from your FirstClass Desktop, select Conferences, then Computers).



Figure 9. Searching the New Uploads file area.

17. I signed up for membership, but I never got any acknowledgment, or a membership number.

BMUG doesn't currently use membership numbers; we track members only by their name, address, and expiration date. In order to keep our membership fees low, we don't do many mailings. You will know that you've been validated as a BBS member when the NewUser folder disappears from your Desktop, and you can send mail and download files.

18. Is there someone I can call in Boston if I have questions about my membership?

No, BMUG does not have an office or a voice number in Boston. All our activities in Boston are run by volunteers, and we don't have the facilities to take phone calls. You can call the office in Berkeley (510) 549-2684 and leave a message to have someone call you back.

19. Does BMUG Boston have classes and meetings?

BMUG in Boston is an all-volunteer effort, so the answer is: BMUG will have meetings and classes if volunteers want them enough to make them happen. Any Boston members who are interested in organizing projects such as meetings or classes should get in touch with the BMUG Executive Director. There is a folder inside the Membership Info conference on the BMUG Boston Desktop, where you can leave messages for the BMUG ED. 🐉



Figure 10. 2 folders you should read regularly

THE BMUG HELPLINE

The BMUG Helpline is where BMUG members can:

- request a technical support callback from a Helpline volunteer.
- request a Helpline Clinic hardware appointment for upgrades, floppy and hard drive recoveries, internal modem and memory installations, etc.
- listen to pre-recorded tech tips and tricks.

THE HELPLINE PHONE NUMBER

The BMUG Helpline can be reached at (510) 540-1742.

Please allow up to 72 hours for a response—and please don't give the Helpline number out to non-members.

HELPLINE VOLUNTEERS

The Helpline receives hundreds of calls every week. Although we wish we had the volunteer power to answer each call as it comes in, the Helpline voicemail has been designed to take the sting out of requesting a callback by keeping it simple, and clear. In addition, please take advantage of our automated help system. We feel we have provided help for nearly any Macintosh problem you may encounter.

THE BMUG HELPLINE CLINICS

Helpline Clinics are held at the BMUG office, where BMUG members can come to get Mac technical support, hardware assistance (by appointment only), and product recommendations.

Clinics are staffed by enthusiastic volunteers, who enjoy helping others. Please let us know if you'd like to become a Helpline volunteer.

HELPLINE CLINIC HOURS

Helpline Clinics are currently offered on Wednesday, Thursday, and Saturday afternoons, from 1:00–5:00 p.m., and Monday evenings from 5:00–9:00 p.m. at the BMUG office.

BMUG ADDRESSES

The BMUG office can be found at 2055 Center St., in downtown Berkeley.

Please send all correspondence to:

BMUG, 1442A Walnut St. #62, Berkeley, CA 94709-1496.

Mac Problem Quick Fixes

Before You Go to the BMUG Helpline

by Robert Glick, edited by Bruce Linde and Michael McMillan

As BMUG Helpline Coordinator, I've realized that a huge percentage of the hardware panic problems and frantic calls to the BMUG Helpline can be easily and calmly solved with a minimum of effort and know-how. What follows is a schematic account of the most basic curveballs your Macintosh will throw at you, and how you, without the aid of the Helpline, can either solve these problems or affirm that your Macintosh has a serious illness.

Problems with Planet BMUG

Here are a few tips for successfully logging onto and navigating the BMUG BBSes in Berkeley, Boston, and the South Bay:

- Read your Newsletter and the New User Info on your FirstClass Client disk. There are articles in the Telecom section of the Newsletter that describe how FirstClass works, how to configure your modem settings, and how to ask for validation on the Bulletin Board.
- When you register for the first time, write down your User ID and password and put them in a safe place in case you forget them (remember, you make up your own UserID and password).
- Save a copy of your customized settings file to your Desktop. You can configure your FirstClass settings file by selecting the correct modem in the FirstClass setup screen, entering your User ID and password, and then selecting "Save as" to save a copy of this file to your Desktop. From that point on, if you double-click on this document, you will initiate the correct log-in process.
- Please register one time only. If for some reason, you have regis-

tered, and FirstClass asks you to register again the next time you log on, this means that you are using an incorrect User ID or password, and the system thinks you're a different user. You will not be validated until the multiple accounts are resolved, which can add considerable time to getting validated.

- If you were validated and, after not logging on for a while, FirstClass asks you to register again, do not fret. FirstClass software is designed so that if you do not log on for 100 days, the server will automatically delete your account. This cleans up the system so there aren't five trillion validated users. In this case, please register and request validation as if you were registering for the first time.
- Remember to request validation. Please send a (nice!) message to the Request Validation folder in order to verify that you are a paid member of BMUG, and start the validation process. If you do not send a message to the Request Validation folder after you register, you will not be validated.
- If you are having problems logging on during the weekends, this may happen because the BBS is undergoing regular maintenance and backup. Try again the next day or after a few hours. If the Planet's modems aren't answering, the BBS machine is down for maintenance or coming back on line.

Macintosh Emergencies

A Sad Mac or a Mac That Doesn't Chime on Startup

If you get the Sad Mac icon when you start your Mac, it probably means that you have corrupted system software or a cor-

rupted device driver. Try to boot your computer from a floppy disk, such as the Disk Tools floppy that comes with your system software disks.

If your computer boots with the floppy disk, you need to re-install the system software on your hard drive (see the section in this article on re-installing your system).

If the problem does not disappear after booting with the Disk Tools floppy, you may have a corrupted hard disk drive. In this case, try to disconnect your SCSI devices. If you can successfully boot your computer without SCSI devices, then you may need to update a SCSI driver with a formatting utility such as the one included on the Disk Tools floppy disk.

If your Macintosh doesn't chime when you boot the computer, it means that there is a hardware problem that requires further assistance. Call the Helpline to investigate the problem, and make a Helpline appointment.

A Flashing Floppy Disk Icon on Startup

If you start your Macintosh and you see a floppy disk icon with a question mark, it generally means that your Mac is not booting off of the hard drive and cannot find a working System Folder. This does not necessarily mean that your hard drive has disappeared forever, but it does mean that your system software is probably corrupted. Before calling the Helpline, try re-installing your system software, or at least booting off the Disk Tools floppy and running Disk First Aid. If this does not work, then call the Helpline for more assistance.

A Hard Drive That Does Not Appear on Your Desktop

- Disk First Aid recognizes your hard drive. Your hard drive may not appear on your Desktop for a variety of weird reasons. First, try to boot your Macintosh with the Disk Tools floppy disk that comes with your system disks, and run Disk First Aid. If Disk First Aid can find your hard drive, then

you know that it is still hanging around. If Disk First Aid can't fix your problem, however, you should try to recover your data using a recovery program such as Norton Utilities, Public Utilities (if you can get it), or MacTools (we recommend the latter).

- Disk First Aid doesn't recognize your hard drive, and you have an Apple drive.

If Disk First Aid can't find your hard drive, and you have an Apple drive, try running the Apple HD SC Setup program. You can find this program on your Disk Tools floppy disk. If Apple HD SC Setup doesn't see your Apple drive, you have a dead, deceased, and post-moribund hard drive. If Apple HD SC Setup does recognize your Apple drive, you may be able to update the driver and recover your data—instead of having to reformat your hard drive and lose all your data.

- Disk First Aid doesn't recognize your hard drive, and you have a non-Apple drive.

If you don't have an Apple drive, you'll need to use a third-party hard drive utility program such as Silverlining or Hard Disk Toolkit.

Other Adventures

You can also try the following if your hard drive doesn't appear on your Desktop: Remove all external SCSI devices from your Macintosh, and add them back in one at a time to see if you can isolate which SCSI device is giving you problems. In addition, try reseating all your cables. Sometimes a bad connection can cause your SCSI devices to act strangely or not act at all.

If none of the above things work, call the Helpline, and we'll help.

Printing Problems

A g'zillion things can cause problems with printing. Here are some simple things to try before consulting a higher power.

- Make sure that all of your connections have power and are connected properly.
- Go to the Chooser in the Apple menu, and make sure that your Macintosh recognizes the printer.
- Check to see that the printer is connected to the proper port.
- If you think your problem has to do with fonts, try creating a new document in

your application. Type a few things in this program with a basic font such as Helvetica, and print. If this works, your problem is with the particular font you are using.

- If you are sharing a printer on an AppleTalk network, make sure that everyone is using the same driver. If you use multiple drivers, printing will take forever and more.
- Sometimes printing problems happen because the computer confuses the serial ports. You can clear the serial ports by 'zapping' the Parameter RAM (see the section on zapping Parameter RAM—known as PRAM—in this article). You zap the PRAM by holding down Command-Option-P-R while starting up your Macintosh. When your Mac chimes, let go of the keys and let it boot up normally.
- Some applications output PostScript files directly. If you see a message that says, "Cannot print due to PostScript error," try opening a new document. Cut only the things you need from your document with the error message, and paste into the new document. Save this file, and try printing. If none of this works, and you're fed up, call the Helpline.

Basic Macintosh Problem Solving

• A Clean System Install

If you need to re-install your system software and are using System 6, you can install new system software over the existing system software. If you are using System 7, you need to do what is called a clean install.

To perform a traditional clean install on System 7.0, boot your System 7 Macintosh using the Disk Tools floppy disk. In the System Folder on your hard drive, move the system and the Finder to the Trash. In the Preferences folder, move the file called Finder Preferences into the Trash as well. Empty the Trash. Once you have thrown out these three files—the system, the Finder, and the Finder Preferences—give the existing System Folder a new name, such as Old System Folder. This will ensure that you end up with a brand new System Folder and important files in your old System Folder will not be trashed.

After you trash the files and rename

your old System Folder, you can restart your computer using the first of your system install floppy disks, and proceed with your System 7 installation.

To perform a clean install of System 7.1.x or 7.5.x launch "Install" from the Install CD-ROM or "Install1." Wait for a Splash Screen to show up, then press Return. The next screen has a button, with a border, that says "Easy Install." At this point press Command-Shift-K. This will bring up a window with two buttons, "Update Existing System Folder" and "Install New System Folder." Select "Install New System Folder" and click OK. Now click Install and proceed with installation.

To perform a clean install of System 7.6 launch "Install" from the Install CD-ROM or "Install1." Do all four steps. The next screen has a button, with a border, that says "Easy Install." At this point press the Options button, click the check box, and press Return. Now click the Install button and proceed with installation.

Rebuilding Your Desktop

The Desktop file is an invisible file that keeps track of your icons, documents, and applications. Because the Desktop file can get confused, it is sometimes necessary to rebuild your Desktop. To rebuild your Desktop file, hold down Command-Option after all of your extensions and control panels have loaded, and before the Desktop appears. The system software will ask you if you want to rebuild the Desktop, and will inform you that all Get Info comments will be lost. Click the OK button and the Desktop file will be rebuilt. Note that while this is an effective way of rebuilding your Desktop, there are Shareware utilities on Planet BMUG that will rebuild your Desktop more thoroughly.

Zapping your Parameter RAM

Parameter RAM, also known as PRAM, is where your Macintosh keeps track of settings defined by the user, such as time of day, mouse speed, keyboard repeat rate, and startup driver preferences.

If you are using System 6, you can zap your PRAM by holding down Command-Shift-Option while opening the control panels from the Apple menu. The Mac will beep to tell you that the PRAM has been zapped successfully.

If you are using System 7, hold down Command-Option-P-R while starting or

restarting your Macintosh. When the Mac chimes to tell you that the PRAM has been zapped, you can let your computer boot normally.

Similar to rebuilding your Desktop, there are Shareware PRAM zappers that will do a more complete job of zapping your PRAM than this procedure.

Playing with Extensions

To figure out whether your extensions are causing problems, try to boot your computer with the extensions off. You can do this by holding down the Shift key when starting up the computer. If you do this successfully, the computer will tell you it is booting up with the extensions off. If the computer works fine, you know that one or more of your extensions is problematic.

At this point, it's a matter of isolating the corrupted or difficult extensions. Start adding one or two extensions at a time and restart your computer until the computer stops working. In this manner, you can find out which ones are not working, or are having conflicts with other extensions or software. There are Shareware programs such as Extensions Manager or commercial software such as Conflict Catcher that will allow you to manage your extensions—and to test for conflicts.

Calling the Helpline

While this guide will help solve many of the easier problems your Macintosh will have, there are many more complex problems which these quick fixes will not affect. For more complex conundrums, my best advice is to call the BMUG Helpline and relax. Remember that each time you lose your cool and scream at your computer—or at someone close to you—because your computer is on the blink, you are probably taking some time off of your life, and to be honest, the computer isn't worth it. Remember also that the BMUG Helpline volunteers are people, human (mostly!), and are doing everything they can to solve your problem. Call the BMUG Helpline, and we'll do our best to help you solve your computer woes. 🐉

First Annual Marathon-A-Thon Raises \$2,000+...

And Everybody Has a Good Time, Too

by Colleen Miller

March 9, 1997, was the date of the first annual Marathon-a-thon here at the BMUG offices in Berkeley. For those of you who aren't familiar with what a Marathon-a-thon is, I should start by telling you that Marathon is an exciting adventure game put out by Bungie Corporation. In fact, at this printing, Marathon is one of the hottest games out there.

Now, there are a couple of ways that you can play the game. The first is that you can play Marathon on a network. The second way is that you can play Marathon against your computer. The third way, and the way that we did it here, is to network a bunch of computers together, sit in a circle, and play for eight hours straight. Kind of kooky, huh? Well, maybe. But aside from being a ton of fun, there was a lot of excitement. After all, we had some major players, such as: the '95 and '96 MacHack Marathon Champion, a couple of Apple employee types with their 300 MHz machines, and a well-known Bay area DJ, M. Dung of KFOX. And most of all, 'thon helped BMUG raise some much-needed cash. In fact, each player got pledges for each hour of Marathon they played. These

pledges came to a total of \$2000 from this one event.

Of course, none of it would have happened without the help of David Schnider, who emceed the event; Lynn Rubin, who provided all the food for the day; Ian Cumming and Ed Ochi, who helped to network the whole set up; all the players; and all the people who supported them with pledges.



So, if you missed it, don't worry. We'll be having more. And if Marathon gets too outdated, or better, hipper, faster, more exciting game comes along, maybe we'll do a 'thon with that one. The point is, the next time one comes along, join the fun—play, pledge or plop (er...as in sit and watch). But do join in! It's what we're about.

See you next time. 🐉

Sincerely,

Colleen Miller
Director of Development

BMUG

A Users' Manual

by David Hauer

Welcome to BMUG! By joining, you have become part of an international community of over 10,000 Macintosh enthusiasts—the world's largest Macintosh Users' Group. BMUG is an educational non-profit organization whose primary goal is to give away information. We are not affiliated with Apple in any way, and we do not accept advertising.

Now that you are a member, you might like to know exactly what BMUG has to offer. But remember: A users' group is its membership. So go ahead and ask what BMUG can do for you. But ask also what you can do for BMUG.

What you can do for BMUG

- Volunteer! While BMUG has a small, dedicated (and underpaid) staff, volunteers are our life-blood. This is both a financial necessity and an integral part of the BMUG vision. By volunteering, you not only help BMUG, you help yourself. Volunteers can learn a great deal, make valuable professional contacts, and increase their influence on the inner workings of the organization.

Volunteering can take the form of working the Helpline (no, you don't have to be an expert to do this), writing for the Newsletter, helping in the office, or many other tasks. To volunteer, contact the BMUG Volunteer Coordinator, Kelly Pernell, at 549-2684 xt: 203, or post a notice in the Volunteers conference on Planet BMUG via Desktop-> BMUG Central-> Volunteers.

- Maintain perspective. BMUG does the best it can under difficult conditions, trying to conform to member expectations that are often divergent and sometimes completely unreasonable. We have had many successes, but

there may be occasions where our limited resources and controlled-chaos style of organization collide with your needs. If this happens, please ask yourself whether your expectations are fair, and whether there is something you can do to help the situation. Above all, don't adopt an us-versus-them attitude. We are all us.

- Encourage others to join, volunteer, and/or contribute materially to BMUG.

What BMUG can do for you

- Helpline
- BBS
- Data recovery/hardware assistance
- Main Meetings
- SIGs
- Software
- Special products
- Member discounts
- Newsletter

Helpline (510-540-1742)

We BMUGers like to say that we are in the business of giving away information, and nothing exemplifies this attitude better than the Helpline. Since its humble beginnings in 1985, the Helpline has provided succor to tens of thousands of confused, lost, frustrated, curious, and frantic Mac users. In certain circles the BMUG Helpline has achieved an almost mythical status, its staffers reputed to know everything about everything.

Such an inflated reputation has contributed to unrealistic expectations on the part of some members. These days no single person—not even a professional Mac guru—has all the right answers to the myriad of questions surrounding the Macintosh and its related hardware and software. And the Helpline is staffed entirely by volunteers. Some of these volun-

teers are experts in their fields and know a great deal; others are relative beginners hoping to help by ferreting out information they don't have in their immediate possession. In any case, the relatively small number of Helpline staffers is sometimes inundated by the torrent of requests for help. Callers experience this as a failure to get a callback.

If you are persistent and patient, chances are good that you will get the information you need—and sometimes more than you need—via the Helpline. Or at least you will get useful leads. But don't rely on BMUG to provide instant, error-free information about all possible topics. Not even the professional technical support staff at major corporations like Microsoft and Adobe can offer that.

One other tip: faxes generally do not receive as timely a response as voice-mail.

Planet BMUG/BMUG Boston/BMUG

Japan (510) 849-2684/

(617) 275-3062/0423-59-7116

BMUG is a truly international organization (some 500 members are in Japan, for example). One of the exciting ramifications of this is the possibility of communicating with people around the world via our BBS, or Bulletin Board Service. Further global links exist in the form of Internet mail capabilities and gatewayed conferences.

Planet BMUG is the name of BMUG's FirstClass (note that this is a proprietary name, not an adjectival phrase) graphical user interface BBS. Since it replaced the old TBBS system in September of 1992, Planet BMUG has been a great success.

Also up and running out of Boston is a second BMUG First Class BBS. Many of the conferences on Planet BMUG are gatewayed to BMUG Boston, and vice versa, so users of either board can communicate

about the same topics and share information.

New to the BMUG BBS family is BMUG Japan. The Japanese BBS is in Kanji (written Japanese) and as a result is not gatewayed with the English language BBSes.

Please note, that membership entitles you to an account on one but not all of the BBSes.

To use Planet BMUG, all you need is a modem and the FirstClass Client software (standard command-line programs such as Zterm will also work, but they will not give you the graphical interface that makes the BBS so much fun to use) which should have been provided to you with your membership packet (either on CD-ROM or floppy disk). If you don't have the Client software, call or come by the business office, or log on with another telecom package and download the software from the root level of the Files folder (directory).

When you first log on, you will be asked for certain information. This info will be used by the administrator to validate your account; be sure it's consistent with what you've given the business office, otherwise you may not be validated.

Barring problems of this sort, validation can take a few days to a week. During this time, your access will be limited to browsing for 25 minutes per day.

For more detailed instructions on logging on, look into the Telecom section of the Newsletter.

Data Recovery/Hardware Assistance

While BMUG isn't set up to do full-fledged repairs or hardware-level data recovery, we do offer members such services as memory installation and software-level data recovery, free of charge. (Please note, though, that BMUG is not an Authorized Apple Repair Center and that such "tampering" may invalidate any warranty still in effect.) Hands-on tasks of this sort are done by appointment only. Call the general BMUG office number (510) 549-2684, ext. 100, to make an appointment.

Main Meetings

BMUG's main meetings have a long-standing tradition of offering information in an irreverent and humorous way.

People come to these weekly events to get answers to questions, to socialize, to learn about new products, and to network. Meetings are held on the UC Berkeley campus at 6:30 pm on Thursday nights at the Berkeley Office. They consist of a lively question-and-answer/news/gossip period, followed by presentations from vendors and developers. Most vendors donate one or two of their products for the raffle which closes the meeting. Check the calendar for information on what's being demo'd when.

BMUG also has monthly meetings in San Francisco and San Jose. Pick up the calendar from the BMUG office for details.

SIGs

BMUG supports a wide variety of SIGs, or Special Interest Groups. Covering the gamut of computer-related topics from Internet to Programming to Women in Computing, these groups are an excellent way to meet others who share a specialized interest and to exchange information and ideas with them. Most SIGs meet weekly in the BMUG office, but be sure to check the calendar for times and locations.

By the way, you don't have to be a member of BMUG to attend the main meetings or SIGs. However, by joining the organization you contribute to their continued success.

Special Products

From CD-ROMs to T-shirts to best-selling computer books, BMUG offers a host of products—many of which were developed by its members. Check out our periodic mailings or a membership application for a list of current products and special bundles. And remember, you aren't restricted to being a consumer of these products; you, too, can be an author or CD-ROM designer.

Software

Even as you read this, programmers around the world are seated at their computers, creating software to be used on the Mac. Some of this material is destined for commercial applicationhood; much, however, will be offered by its authors directly to the public, either free or as Shareware. The challenge with such software lies not in paying for it, but in find-

ing out about it and getting a hold of it in the first place.

BMUG has an enormous collection of Freeware and Shareware applications, utilities, fonts, graphics, etc. You can access this library in floppy-sized pieces (available by mail or directly from the office), in big chunks on CD-ROM, or (in many cases) by downloading from our BBS. (Remember, though—the fee you pay BMUG covers only our labor and materials; Shareware authors still expect and deserve their fees if you use their programs.)

Vendor Discounts

A number of vendors offer special prices to BMUG members. The list is in continual flux; you can find current listings on the Planet via Desktop —> BMUG Central —> BMUG Specials, as well as in our biannual mailings of the Winter and Fall Update catalogs.

New sletter

The 300-page-plus "newsletter" you get with your membership comes out twice a year and goes to members only. Containing everything from product reviews to fiction, the newsletter is full of useful information, humor and innuendo—most of it unavailable elsewhere. Members are encouraged to contribute articles and editing skills.

Finally

Once again, welcome to BMUG. Comments/feedback are encouraged, particularly when proffered in a helpful and considerate fashion—and even more particularly when accompanied by an offer of help. 🐉

©David Hauer 1997

BMUG's Future is Bright

A Letter from the Executive Director

by Ann M. Wrixon

This will be my last column as BMUG's Executive Director. As of August 15, 1997, I am leaving BMUG to pursue other interests. My two years at BMUG have been an incredible roller coaster of a time. BMUG changed and grew dramatically as we watched Apple Computer change CEOs and then make startling, and we hope, positive, changes in its direction.

When I arrived at BMUG I had several goals, including erasing BMUG's debt, developing a community outreach program, improving services, and capturing a wider audience for BMUG's services and products. We have been fortunate to have achieved almost all of these goals and more.

Financial Solvency

BMUG's most pressing problem when I arrived was a large old debt. Working with the BMUG staff, we dramatically cut expenses. This last fall, Development Director Colleen Miller and the Board of Directors spearheaded a fundraising effort that helped erase a significant portion of the debt and restored the organization to financial solvency. Countless BMUG members helped with this effort, and you should all feel good that your efforts really made a difference.

Unfortunately, BMUG is still working to pay off the remaining part of the debt, as well as build a cash reserve for future improvements and cash flow control. This fall, the Board of Directors will launch another fundraising drive in order to permanently eliminate this debt and build for BMUG's future.

Community Outreach

One of the most satisfying aspects of BMUG's work over the last two years has been the development of the Computer Placement Program. BMUG members and Apple Computer have donated used and new computers for placement in the homes of low-income families.

Colleen Miller started the effort and recruited BMUG member Ian Cumming to fix and test the used computers. Dozens of computers have been placed in homes. Priority is given to low-income, single-parent families with school-age children. The parents must be enrolled in a computer class or attend BMUG's free MacEssentials class.

BMUG's free classes and Special Interest Groups have really taken off in the last couple of years. The MacEssentials class run by BMUG member Doug Bourquin can draw up to eighty students each week. The Claris SIG, run by BMUG member Thomas Benner for almost two years, has also been extremely successful, drawing large numbers each month.

BMUG is also working in conjunction with other non-profits in the San Francisco Bay Area to make technology accessible to the low-income community.

BMUG Expansion

BMUG grew by about 30 percent in the last two years. This was a result of several factors. First, as many of you know, for the last year and a half The BMUG Newsletter has been distributed in bookstores throughout the United States and Canada by Peachpit Press. And, with the debut of this issue, the Newsletter will be available on newsstands as well.

Second, BMUG services improved dramatically. Planet BMUG and BMUG Boston became accessible via the Internet. Planet BMUG Administrator Chris Harris has also been able to keep the Berkeley BBS (electronic Bulletin Board System) operating trouble-free about 99 percent of the time. BMUG Boston Administrators Roz Ault, Tom McGee, Cathy Rudolph, and Becki Sherman have continued to do an outstanding job with the BBS in Boston. And recently BMUG volunteers in Tokyo have opened a Japanese BBS. BMUG Japan Administrators

Satoshi Furuno and Yasuichi Kitamura have done an outstanding job with getting the Tokyo BBS up and running.

Currently Chris Harris is working on a major upgrade of the BBS in Berkeley that will dramatically improve performance, including speed of access and downloading. BMUG Boston will upgrade shortly after Berkeley does.

The Future is Bright

BMUG is clearly stronger and more exciting than ever. Our BBS and Newsletter have both won awards for excellence. People continue to join and renew their BMUG memberships in ever-increasing numbers. Our classes are filled to capacity and our CD-ROMs, books, and other products are perennial favorites.

Many Thanks to the Membership

I consider myself so fortunate to have had the opportunity to work at BMUG and become part of this truly remarkable community.

I want to sincerely thank the BMUG membership for its incredible support for BMUG during the last two years. BMUG is a remarkable organization, and that is entirely a result of the extraordinary individuals who make up the membership.

Many, Many Thanks to BMUG Boston and BMUG Japan

BMUG is both a national and an international organization. BMUG maintains BBSes in Berkeley, Boston, and Tokyo. Although the BMUG staff is located in Berkeley, California, and administers the BBS there, it is BMUG volunteers in Boston and Tokyo who keep BMUG alive in those locales.

I cannot say enough about the dedication and technical expertise of these volunteers. Furthermore, BMUG Boston volun-

teers also staff the Boston Macworld Expo BMUG booth. BMUG volunteers in Tokyo not only staff the Tokyo Macworld Expo BMUG booth, but they also translate all of the BMUG material into Japanese and contribute an entire Japanese section of articles to the Newsletter. BMUG Boston and BMUG Japan have also shown me such hospitality during my visits that I can hardly repay the kindness, except to give you my most sincere thanks.

Special Thanks to the Board of Directors

I would also like to specifically thank the individuals who served on the three Boards of Directors of BMUG that evaluated, and oversaw my work. The first Board—the one that hired me—included: Robert Boger, Raines Cohen, Karin Hart, Tim Holmes, Peter Linde, Noah Salzman, David Schwartz, and Fred Swan. The second Board included: Carol Haberberger, Tim Holmes, Mitch Huitema, Bruce Linde, Peter Linde, Noah Salzman, David Schwartz and Fred Swan. The current board includes: Carol Cantwell, Michael Ellard, Carol Haberberger, Bruce Linde, Peter Linde, Lynn Rubin, David Schnider, and Robert Thyken.

The BMUG Board of Directors is an incredibly talented and dedicated group of individuals. They have provided the vision and much of the fundraising that has kept BMUG at the forefront. In particular, I would like to thank Peter Linde and Fred Swan who, as chairs of the Board, have served with brilliance, wisdom, and good humor.

Thanks to the BMUG Staff for Outstanding Work

It is with special feeling that I thank the current and former BMUG staff members who have worked with me. Each and every member has contributed in ways that are way and above the call of duty. Thanks to Abby Andrews-Slonaker, Carol Cantwell, Catie Branwyn Fuld, Lisa Gonzales, Chris Harris, Arthur Lau, Kevin Lockey, Sheila Sondik, Emeline Mann Sanchez, Deldelp Medina, Colleen Miller, Sean O'Connor, Kelly Pernell, Gerald Raddatz, David Schnider, Lisa Taplin, Stan Troutner, and to all the interns (you know who you are). 🇺🇸

Sincerely,

Ann Wrixon

BMUG Executive Director

Was MacFest '97 the Hottest Event of the Year?

by Colleen Miller

Well, it was for us. We BMUG staffers were running around so much trying to get all of the vendors set up, making sure the conferences were running smoothly, trying to direct attendees to the best deals in the house and the raffle table... we've never been so hot. Other than that, we staffers still think it was the hottest event of the year—at least for BMUG.

MacFest '97 started off with Ellen Hancock, Apple VP, as our keynote speaker. She spoke to a packed auditorium and discussed the state of Apple today and what Apple's predictions are for the future. Knowledgeable, witty, and a good speaker, she set the tone of the day. This was one of the few events that we charged for this year, and one of the things we learned was to make sure we posted the \$5 charge a little more clearly than we did last year.

Following Ms. Hancock, Mac enthusiasts sauntered over to the MacFest show floor to check out some of the bargains that the forty-plus vendors had brought. In the past, MacFest has been a "look and learn only" show. This year, however, we changed the format to allow vendors to sell. And sell they did. Visitors were hot to buy everything from refurbished computers to statistical software to Alphasmart Pros to computer classes to Wacom tablets to RAM. Needless to say the list goes on, and it was all fantastic.

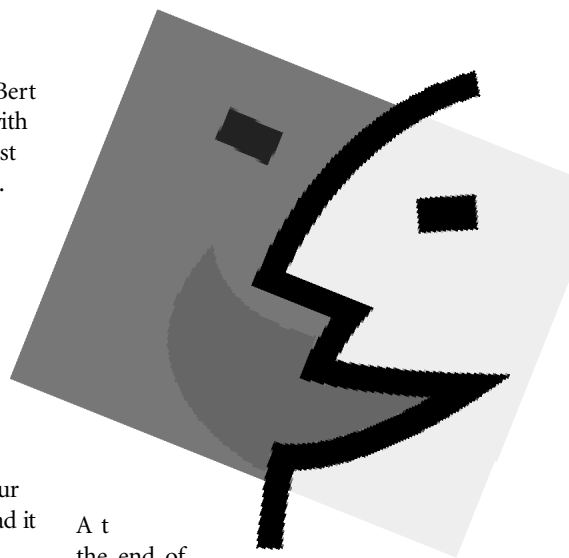
For those who got bored with the show floor, there was plenty to do in the conferences. Almost every conference was booked to capacity. Of course, with the speakers we had this year, it would be surprising if we'd

had anything less than capacity. Bert Monroy showed up to dazzle people with his PhotoShop techniques. Adam Engst came to discuss all the "tidbits" he knew. Don Crabb came to discuss what's happening in the industry, and he knows a lot about what's happening. Bob Levitus came to evangelize for Motorola. And we learned how to buy a Mac, how to create Web pages, how to use our PowerBooks more effectively, how to use our NisusWriter more efficiently, and how the heck to start our Mac! From useful to entertaining, we had it all.

And, did I forget to mention that Jean Louis Gasse stopped by to talk for an hour on the Be operating system? He also was incredibly knowledgeable, witty and supportive, and I'm sure Be and Power Computing are an excellent combo ;). I think we'd all love to have JLG back here to speak any day.

As with most BMUG events, one of the highlights of MacFest was the raffle prizes we gave away every hour on the hour. We had tons of winners. The prizes were pretty darn good, too—everything from the latest versions of software hot off the presses to a 12x CD-ROM drive to a Wacom tablet, just to name a few things.

As a fundraiser, we also held a separate raffle where we sold tickets (we actually asked for donations, and everyone got one free ticket). The grand prize here was a PowerMac 7200, followed up by Zip drives, a 1 gig hard drive, a Quickcam, and a few other things.



At the end of the day, when all was said and done, we had over 7,000 MacFest attendees, an all time record. Special thanks should go to Sean O'Connor for handling all the logistics so well, CatieBranwyn Fuld for running the BMUG Outlet Booth, Kelly Pernell for running the main BMUG booth, Ann Wrixon for her excellent input, Abby Andrews-Slonaker for her stellar graphic design, and all the other BMUG staffers who helped out tremendously. We also need to thank our volunteers (there are just too many to name). Without them, it just wouldn't have happened.

So the vendors were great, the conferences were outstanding, the raffle prizes were unbeatable. But let's be honest, it won't hold a candle to next year! Come and join us then. 🦄

Colleen Miller is BMUG's Director of Marketing and Development.

Letter from the Treasurer

BMUG Board of Directors

by Michael Patrick Ellard

During our Fall 1996 fundraising drive, BMUG received many requests for information regarding our financial situation. People were curious about how BMUG works as a business and where the money that is donated to BMUG goes. Based on the questions that we were being asked, we decided to start a new BMUG tradition: A letter from the BMUG Treasurer in every copy of The BMUG Newsletter. This letter will give you a high level overview of BMUG's economic workings so that you can better understand us from a business perspective.

As a thirteen year old non-profit in the computer industry, BMUG has seen its fair share of ups and downs over the years. We've had boom years and bust years, membership surges and membership declines. For many years, BMUG was managed by computer professionals who were great at keeping us on the cutting edge, but who weren't always the best managers from a financial point of view. For the past two years, BMUG has been managed by an MBA with considerable experience in the non-profit arena. Our adoption of a more businesslike management style has brought a period of considerable stability to BMUG. During these last two years we have steadily decreased our debt and increased our membership enrollment.

Two years ago, BMUG had outstanding accounts payable of around \$250,000. Today, BMUG's outstanding accounts payable have been reduced to \$100,000. BMUG's goal is to have around \$40,000 to \$70,000 in payables outstanding at any point in time, so we haven't reached our target yet. However, we have made outstanding progress.

Our financial year runs from October 1996 to September 1997. We have a total annual budget of \$626,000, with an expected surplus of approximately \$5,000. Our current projections show that we will exceed this surplus, but not by a huge amount.

At this point in the year, our income has been:

- 70.4% Memberships
- 14.3% Products
- 0.8% Grant Funded Community Services
- 14.5% Fundraising

Our expenses for the year have been:

- 76.2% Memberships
- 14.6% Products
- 0.9% Grant-Funded Community Services
- 8.2% Fundraising

In real dollar terms, we expect to lose a small amount of money (\$15,000) by providing membership services, but we anticipate that our fundraising efforts will provide us with enough money to make up for this loss. Our products sales and grant-funded community services are projected to break even, but not make significant amounts of money.

Why are we going to lose money on membership services? We think that it is very important to provide affordable services to all Mac users. For this reason, we provide a \$45 discounted membership for people who cannot afford to pay the full \$65 membership fee. We do lose money when people renew at the \$45 level, but we are willing to do this because we feel that it is important to provide services to everyone in the Mac community. However, if you can renew at the \$65 level, we encourage you to do so.

The BMUG Board of Directors has already begun the process of planning for our 1997-1998 financial year. During the coming year, we are hoping to complete the reduction of our accounts payable to an appropriate level, and we hope to begin building a cash reserve to help us manage our cash flow. Support from our members is a vital part of this plan. Donations from members help us greatly in reducing our accounts payable and building up a cash reserve. Renewing your membership on time at \$65/year will also help us in our job of keeping BMUG as a healthy and vital part of the Macintosh community.

BMUG has made tremendous financial progress over the last two years. We haven't achieved all of our financial goals yet, but with your help, we will! 

Michael Patrick Ellard

Letter From the Director of Marketing and Development

by Colleen Miller

Dear Members:
Well, I hope life's treating you all well. Life is treating us pretty well here at BMUG, thanks to all of you wonderful members who contribute to us in so many ways.

Raising money is exciting, challenging, necessary and often a pain in the neck. One of the ways I make it pleasant is to think up fun things to do - fun for me and fun for our members. AND that in turn benefits BMUG and benefits you. After much thought, planning and input from members, I think we succeeded in having some fun with our goals this season. Let me fill you in.

At the end of last year, BMUG needed to raise a fair sized amount of money rather quickly. We instituted numerous ways to raise this money, but one of the most exciting was the creation of a new membership category called the SuperHero. For \$1000, you could become a lifetime member - a "SuperHero". This would entitle you to a special listing in the BMUG Newsletter, a free T-shirt and the Best of BMUG CD-ROM collection. Of course you could forego all of the above and take the donation as a tax write-off. The response to this was wonderful. To see the support of so many members rally around BMUG was incredible. At one BMUG Main Meeting, Ann Wrixon made the SuperHero announcement and was met by 3 people asking to become SuperHeroes immediately (please see our list of SuperHeroes in this issue). Now that's community!

We also started a new annual event here this year called the Marathon-A-Thon. For one solid day, we had a group of people who raised \$2000 in pledges by playing Bungie's Marathon for eight hours straight. These people were members and nonmembers alike and included the MacHack Marathon champ, an Apple employee with a 300 MHz prototype machine, and M. Dung, the KFOX radio personality. Many of

our members didn't play but showed their support by donating breakfast and lunch for everyone (thank you, Lynn Rubin), setting up the entire network (thanks to Ian Cumming, Ed Ochi and all of the rest of you), and cleaning up after the Fest (Ed, Ian, and the others once again). Now that's support!

Also, this year, we held our annual trade show on the UC Berkeley campus. This year's MacFest '97 was our biggest show ever with more than forty vendors and over 7,000 attendees. The bargains were only surpassed by the raffle prizes! The raffle prizes were only surpassed by the amount of fun we had putting it together. Now, for us, MacFest is a big show. It takes time to coordinate, manage and get it right. The reason why it works so well is because of our great members (Jay Broadwell, Jim Scanlon, Leslie Smith, and a billion others who helped)! Now that's teamwork.

So what else is coming up? Well, by the time you read this, we will have put together a silent auction, and a rummage sale, done MacWorld Boston, and co-hosted another Marathon-A-Thon. Now that's fun!

So, see, raising money for me is fun, what with Marathon-a-thon, MacFest, silent auctions, and MacWorlds. But mostly, I'm able to raise money because of all the community, support and teamwork I get to experience by being here. BMUG's an incredible place; a place I suggest you experience as much as you can. Get involved and take part. Volunteer, become a SuperHero, help with the refurbishing project, meet new people, play in a Marathon tournament, but mostly take part. Taking part - Now that's BMUG! 🦸

See you soon,
Sincerely,

Colleen Miller is BMUG's Director of Marketing and Development.

Update on the Computer Placement Center

Well, this is just a short note to let you know what's going on with our Computer Placement Center. For those of you who don't know, BMUG started a refurbishing center in February of 1996 in order to place older Mac machines into the homes of low-income families, seniors and physically-challenged individuals. We also decided to sprinkle in the occasional donation to local non-profits. The beginning of this program was slow going. We received no money from foundations to hire staff and worked only with volunteers who would come in and refurbish older, donated computers (mostly Pluses at that time). These volunteers were wonderful, but we needed more! Then came Ian Cumming, volunteer extraordinaire, who donated a great deal of time refurbishing computers, getting donations, and teaching people how to refurb. Thanks to Ian's dedication and hard work, we have now placed sixty+ computers in the past fifteen months. That's great and I want to double that number by this time next year.

By the way, we don't just dump these computers into homes where people have no idea what to do with them. We try our hardest to assign a mentor to our recipients. A mentor can truly make this donation an incredible gift by supplying time, patience and humor. One of our mentors goes far beyond that. Yvonne Garcia donates an incredible amount of time mentoring individuals. She has taken on as many as three of our recipients at a time, which is quite a load, considering she's volunteering! And every recipient loves Yvonne. I've gotten tons of phone calls and letters about how wonderful she is.

Ian and Yvonne help to make this program what it is. You, too, can help to make this program even better by volunteering as a mentor, volunteering to refurb, donating your working computer (we only accept Mac SE's and above at this point) or modem, or supporting us financially.

As I close this update, I'd like to post part of a letter I received from a recent recipient:

"I can't thank you deeply or thoroughly enough... This computer is the best thing that's happened to me in years. ...As a result of receiving this computer, I have signed up for some basic Mac classes at the College of Marin in the hopes of starting the Computer Certificate Program...

"The assistance Yvonne has given me has also been incredible. I feel I am on my way to the future. I owe a lot of this to you (BMUG).

"...With tremendous appreciation for all you've done,

"S.W."

Now that makes it all worthwhile. 🐱

Sincerely,

Colleen Miller

Director of Marketing and Development



THANK

YOU FOR

carlos



Letter from the Chair

by Peter Linde

It is with a mixture of sadness and gratitude that I put finger to keyboard in order to write this letter. Both emotions are inspired by our Executive Director, Ann Wrixon. As you probably know, Ann will be leaving BMUG shortly after this Newsletter is released at Macworld in Boston. She is moving on to pursue other interests.

It has been a pleasure to work with Ann these last two years. Under her guidance, BMUG has made several amazing transitions. Ann is the first professional non-profit manager in BMUG's history. Those who led BMUG before her arrival were wonderful people with great ideas and intentions. They brought BMUG as far as they could. But having an Executive Director with real-world non-profit experience (not to mention an MBA!) has helped BMUG achieve things we never thought possible.

For one thing, we were able, under Ann's leadership, to trim expenses without trimming services. We also saw the need to grow as an organization and add to our role of helping the wider community. We are able to attract grants and donations as a result of our new work and the good will we have built up over the years.

Under Ann's guidance, and with the help of our incredible Development Director, Colleen Miller, BMUG applied for and received its first grants. Its very difficult to get grants when you have never received them before. It is a bit of a catch-22, but once you have received grants, it is easier to get even more grants in the future. We hope that we will be able to fund more activities, such as the Computer Refurbishment and Placement Program, with grants in the years to come.

This brings us to one of the most important changes that BMUG has undergone in the last two years. BMUG was start-

ed as a hobbyist group centered around people helping each other to learn more about and to better use their Macintosh computers. In the last two years, in addition to maintaining those goals, BMUG has also moved down the road toward becoming a "real" non-profit. We have ties to other non-profits, we help our local community, and, in addition to all the great services we have always provided for members, we now reach out to more of the community and help folks who otherwise might not have any access to computers.

Although many people, including the staff and BMUG's wonderful volunteers, contributed to our many successes during this last year, much credit goes to Ann as our leader.

Ann started by putting together one of the best staffs the organization has ever seen. This fantastic group of people set about reshaping many of the fundamental ways that BMUG does business. Our financial house is in order, our relationships with vendors are the best they have been in years (if you had the chance to come to MacFest this year, you would have seen evidence of that!), Planet BMUG runs smoothly, the Newsletters are bigger and better than ever. In a nutshell, more members are being served all the time.

So, Ann, thank you so much for guiding BMUG these last two years. I look forward to working with you as a volunteer to help keep BMUG moving in so many positive directions.

While Ann, the staff, and volunteers have been kicking butt, this year has also been the most active year for the BMUG Board since I joined the Board almost five years ago. For the first time, members of the Board of Directors participated in a coordinated fundraising effort that raised close to \$70,000. While cash flow limps on, we are largely out of the financial woods. Next

year's Board will continue the fundraising efforts so that BMUG can lay its debt to rest and build up a comfortable cash reserve.

The Board has also been working to revamp our role and the way the Board functions, as well as our goals for the Executive Director and for the organization. For the first time, we have an actual job description for the Executive Director, a formal budget process, formal written rules for adopting policies, etc.

Through the years, there has often been a lot of resistance to adding more structure to the way BMUG operates. It just wasn't... BMUG. In truth, BMUG's "funkiness" has been one of its strengths. It has often helped us to remain flexible and in tune with our membership.

But sometimes funkiness can get in the way of providing the best service and products that we can. I believe that we were starting to strain the limits of what we could achieve in the absence of form and structure. The trick has been to set up structures that help BMUG be more BMUG rather than altering the fundamental character of the organization.

I believe we have been successful at striking that balance so far, and I trust that future Boards will continue that work as BMUG grows into the future.

As a final note, I want to acknowledge the hard work of the volunteers who run BMUG Boston and BMUG Japan. I have been fortunate enough to meet many of them when I have traveled to Boston and Japan, and have been impressed and inspired by their dedication and hard work.



Sincerely,

Peter Linde *BMUG Chairman
of the Board of Directors*

BMUG Volunteer Signup Sheet

Thank you for your interest in helping BMUG!
We welcome you to the BMUG family of volunteers.
Please complete the following survey by filling in your
personal information and checking off the items you
would like to do for the benefit of BMUG—and
yourself, of course.

Please return the form to Kelly Pernell, BMUG, Inc.,
1442A Walnut St. #62, Berkeley, CA 94709-1492;
Fax (510) 849-9026;
Email kelly_pernell@bmug.org.

Personal Information

Name _____
Address _____
City _____
State _____
Zip _____
Telephone _____

Which way do you prefer we contact you? ☐ phone ☐ fax ☐ email

Days and hours of availability (Approximate) _____

Topics of Interest

Please check the boxes
beside the areas of interest

General Office Assistance

- ☐ Labeling and Stuffing Envelopes
- ☐ Assistance with Shipping Mail Orders
- ☐ Database Entry of BMUG Info Requests and Volunteer Surveys
- ☐ Managing Classifieds Listings
- ☐ Callbacks for BMUG Info
- ☐ Unpacking Shipments Returned from Expo

The BMUG Helpline

- ☐ Retrieving Phone Messages from Voicemail
- ☐ Answering Helpline Phone Calls
- ☐ Hardware/Software Installation, Repair, and Diagnosis
- ☐ Helpline Certification Program Instruction
- ☐ Assistance with Volunteer Incentive Programs/Events

The BMUG Newsletter

- ☐ Editing BMUG Newsletters (must be on Planet BMUG)
- ☐ Submitting a Newsletter Article
- ☐ Choice Products Evaluation and Database Management

Must Be Local to Berkeley, CA

- ☐ Proofreading
- ☐ Database Management of Articles and Editors
- ☐ Indexing

Publishing

- ☐ Graphic Art Design
- ☐ Pre-press Work
- ☐ Layout/Production Art
- ☐ Illustration
- ☐ Photography
- ☐ Assistance with the BMUG Web Page

Special Events

- ☐ Working in the BMUG Booth at Expos/Special Events
- ☐ Packing Shipments for Expos (in Berkeley, CA)

- ☐ Hauling Materials to Show Sites (truck definitely a plus)
- ☐ Handing out Flyers and Putting up Posters
- ☐ Contacting Vendors (mainly for BMUG MacFest)

Refurb Project

- ☐ Contacting Potential Recipients
- ☐ Callbacks for General Info on Refurb Project
- ☐ Hardware Repair of Donated Computers (in Berkeley, CA)

Thank You!

Features



Mac OS 8

Everything You Ever Wanted to Know, and More

Peter Adler, David Schwartz and many other BMUG Gurus

When Apple released Mac OS 7.6 in January of 1997, demos and magazine articles had spelled out pretty clearly what to expect. Improvements to the Installer, a faster Finder, a much improved Extensions Manager—and another Mac OS 7.x upgrade due in July.

Apple has put enough new features into this next system release that they've decided to change the version number from Mac OS 7.7 which had been tentatively planned, at least according to early development versions seen on the Net, to Mac OS 8.

Some have speculated this was done to reuse the marketing material created for the now defunct Copland operating system which Apple killed off late last year. Others say, by changing the major version number Apple is then able to renegotiate the licensing fees with the clone manufacturers. No doubt these and still other reasons had some impact on the decision, however there seems to be consensus among developers, beta testers, and early press reports that this upgrade is worthy of the increased version denotation.

Apple claims this is the biggest revision of the Mac OS since it was introduced. While there is no doubt the Mac OS has lain idle for many a year, over the past half of a decade, and everyone is thrilled to see the OS advance in any significant way, it's hard to believe anything included in Mac OS 8 compares to the leap in usefulness the Mac community received with the move from System 6 to System 7. Don't forget System 7 brought MultiFinder into its own, added its own version of a 3-D appearance, introduced the Application menu (a.k.a. "the Process menu"), aliases, and the ability to use the Shift key to boot without extensions.

Of course whether this is or is not a greater leap than previous upgrades is really not the point, the question is, is it a great enough leap? (Besides, who can blame Apple for being overzealous in their marketing, they finally have something to market and they are actually doing so?)

Can My Mac Use Mac OS 8?

Mac OS 8 is qualified to run on all PowerPC Mac OS computers, clones as well as Apple's own Macintoshes, as well as the entire line of a 68040 (and 68LC040) Macintoshes.

Yes, this does mean that the beloved IICI and SE/30, along with any other 68030 Mac, are finally left in the dust. Apple has stood out for years for having the most backward-compatible operating system on the market, with System 7.5.5 still able to run on machines created as far back as 1985, the Macintosh Plus. (That's 11 years!) Compare this to the Wintel world where 486-based computers are starting to look quite anemic and 386-based computers are right out.

But alas, this has cost Apple. While the Wintel world pushed their customers into upgrading their systems—of course at the customers' expense—Macintosh owners have been able to ride along on their Macs for years, upgrading over and over again and staying current with the very latest speed demons, albeit in technology only, not in speed.

While Mac OS 7.6 left behind 68000, 68020, and non-32bit clean 68030 Macs, Mac OS 8 goes a step further and cuts loose the entire line of Macs with the 68030 CPU. This includes the PowerBook 150, which Apple sold as recently as two years before the introduction of this OS release, and any Macs which have been upgraded to 68040s but can still work in the 68030 mode. (68030 machines upgraded to 68040 motherboards should continue to be supported.)

While Mac OS 7.6 left behind 68000, 68020, and non-32bit clean 68030 Macs, Mac OS 8 goes a step further and cuts loose the entire line of Macs with the 68030 CPU.

The business argument for such a decision makes sense. Those using machines as old as that are the least likely to upgrade the system software, and even less likely to spend a significant amount of money on software in general. Does this mean those customers deserve to be left behind? Of course not, but Apple may have finally learned that they must be a business as well as an ideal. (They've had a tough time of showing themselves to be either one of late...) It takes vast amounts of resources to qualify a system software release on that many machines, especially when you consider the vast number of boxes Apple shipped under the Performa brand name in then Apple CEO Michael Spindler's misguided attempt to stave off the need to allow clones by filling the shelves with more Mac models than even Apple could keep track of. As the saying goes "Sure we lose money on each one, but we make up for it in volume!"

Apple continues to point out they are cleaning up the system software as they bring out new versions of the system.

Mac OS 7.6 will not run on the following Macs:

68000

Macintosh Plus

Macintosh SE

Macintosh Classic

Macintosh Color Classic

Macintosh Portable

Macintosh PowerBook 100

68020

Macintosh II

Macintosh LC

68030 non-32bit clean

Macintosh IICx

Macintosh SE/30

Macintosh LCII

Mac OS 8 will not run on the following Macs:

A vast number of 68030 machines

Any machines which can dual boot from
68040 upgrades

What About My Software?

According to Apple, Mac OS 8 is supposed to be 100% compatible with the existing System 7 applications. Tests of the pre-release operating system do seem to indicate that very little software will have any problem running under Mac OS 8, however widespread distribution will be the true test and it's unlikely Apple will have been able to pre-empt every possible bug and glitch.

Certain utilities which tie in closely with the Finder will have some difficulty as the Finder has been entirely rewritten. These are likely to include several of the Connectix utilities such as Speed Doubler, some of Aladdin's products such as their True Finder Integration features in

StuffIt Deluxe, and Now Utilities, the features of which recently started to mimic those Apple had been talking about including in Copland, and more recently in Mac OS 8.

Certain utilities which tie in closely with the Finder will have some difficulty as the Finder has been entirely rewritten.

You can likely expect a rash of updates from any company whose products aren't completely compatible. It's unlikely companies will abandon their markets easily.

How Big Is It?

The hard drive and RAM requirements for Mac OS 8 don't differ greatly from those for Mac OS 7.6; 12 megs minimum of physical RAM up from 8 megs, and anywhere from 60 megs to 120 megs of hard drive space, depending on the software you choose to

install.

Like System 7.5.5 and Mac OS 7.6 (see sidebar) before it, Mac OS 8 includes a much revised version of Virtual Memory (VM) which finally works as it should have all along; reasonably.

In the past, Apple's VM was so dog slow that rarely would it be chosen over RAM Doubler, and running it on a PowerBook was just asking for it. Since System 7.5.5, which introduced the newer revision, VM is finally a usable alternative. It's still hard on battery life and still needs as much hard drive space as the amount of physical RAM in your system plus the amount of virtual memory you would like on top of that, but these days you'll barely notice any speed hit while using it.

Lastly, Mac OS 8 will ship in retail and mail order outlets as CD-ROM only. This is likely due to the fact that the floppy version will be around 40 or 50 disks! These disks will be available for an additional cost directly from Apple. Given the extra cost, the sheer amount of time it takes to install 40–50 floppies, hand swapping each one, it makes better sense to save yourself the time and effort and buy a cheap CD-ROM drive. You can get a new internal double speed drive for \$50, an external for another \$25—and a used one for less. As slow as a drive this speed may be, it still beats swapping floppies. Touch the mouse! (See sidebar.)

At BMUG meetings when a vendor stands up in front of the crowd and talks and talks and takes forever to actually show the dang product they often get shouted at to "Touch the mouse," get over their marketing spiel, and get on with the software demo. It's similar in effect to "Where's the beef?!"

What's the Big Deal?

Apple hasn't sat on its collective duffs for the past year. Aside from the obvious interface enhancements, which Apple has been demo-ing in various dark rooms for years now—in fact, they predate Copland having been shown at Apple's Worldwide Developer Conferences (WWDC) as

It would be logical to assume that future releases will continue this forward trend. The next release code-named Allegro, will likely take this to it's logical conclusion of eliminating 68040 machines as well, so be prepared!

Consider this decrease in testing due to the number of machines as a chance for Apple to concentrate on testing more deeply on those machines it continues to support.

Apple made a big deal of "branding" their operating system right around the time between System 7.5.5 and Mac OS 7.6. So versions previous to 7.5.5 go by the old nomenclature of "System," while later versions are officially called "Mac OS X.X."

“Fanfare” long ago—Mac OS 8 seems to be one of the most, if not the most, stable and fast OS releases ever seen out of Cupertino’s Infinite Loop R&D center.

Aside from all the Rhapsody hoo-ha at the 1997 WWDC were Mac OS demos, presentations, a compatibility test lab, and even

There are differences of opinion as to whether making these portions of the OS native will provide any real benefits. Apple’s File System engineers argued vehemently with a room full of developers at WWDC that making them native wasn’t the key, other issues were, but we’ll leave the techie wars to those who know more.

real live CD-ROMs of the system software for the attending developers. From the buzz in the concourse, many developers were running the alpha version on their development machines as it was more stable than the then current Mac OS 7.6.1! (Developers are well-known to be squeamish about the stability of their development machines...)

Virtual Memory is said to be further improved, but you’d be hard pressed to tell the difference from recent previous releases (7.5.5 and later). Further portions have reportedly been made PowerPC native, but there don’t seem to be any details to be found as to which, though it seems the File System and I/O systems still aren’t. (See sidebar.)

In addition, many of those annoying little extensions which few had any clue as to what they did, have now been rolled directly into the system. This is good for several reasons. One, developers were having a hard time keeping up with which version would be installed, which version they should install, and how many versions there even were. With this roll-in, developers no longer have to deal with these issues, and nor do you. These items include the WorldScript Power Adaptor and the ObjectSupportLib file to name two a few. This should have been done long ago and Apple still has a long way to go. There are still nearly a dozen Open Transport library files in the extensions folder. This really

needs to be rectified.

Many of those annoying little extensions which few had any clue as to what they did, have now been rolled directly into the system.

Apple continues to point out they are cleaning up the system software as they bring out new versions of the system. There is certainly reason to believe that they have plenty to clean up. As they drop support for older hardware they can remove code written into the system that was specific to that hardware. Since they’ve now dropped support for 68000s, 68020s, and 68030s (which includes all the non-32bit clean hardware) there’s likely to be quite a bit they can clean out.

Of course they must now add support for the new machines so it’s unlikely the system will get smaller, but this certainly can’t hurt stability!

There is no doubt more of the system’s insides have been worked on and as Mac OS 8 hits the streets we’ll see whether that’s for the good or the bad. There’s no test like the real world.

Get to the Toy s!

Okay, enough of the blood and guts, let’s get on to the new toys!

There really are a lot of new user interface items in this version of the Mac OS.

The first thing you encounter with any new system is the Installer! While Apple’s Installers have usually beaten the competition in both ease of use and general friendliness, things had been getting a bit overwhelming lately. With multiple installs required for the many Mac OS technologies introduced over the past few years, few of which had been rolled into the Mac OS, (Text to Speech, GX graphics, Apple Remote Access, etc.), it was beginning to feel like a real chore, and not a short one at that.

With Mac OS 7.6, Apple introduced a revised Installer—they would, no doubt, call it “a new installation experience”—and multiple items could be installed without constant interaction, and, thankfully, without restarting between them.

Mac OS 8’s Installer continues to enhance this “experience,” though still not enough. The clean install option, installing a completely fresh System Folder rather than installing over a previous system, remains a visible option, and it continues to automatically check the disk for corruption. In addition, the Installer now automatically updates your hard disk drivers as well.



This can be a bit scary if you don’t understand what it’s doing, and there had been reports, albeit while the software was not yet finished, of the Installer updating drivers on non-Apple drives. This, as you can imagine, would be a bad thing.

If your drive isn’t an Apple formatted



drive, such as an external drive, or a clone Mac OS computer, or if you have replaced your internal hard drive at some time, then you have the option to turn this feature off within the Options button. However, if you do have an Apple formatted drive, it’s recommended you allow the Installer to update the driver.

The rest of the Installer is pretty much



just like the Mac OS 7.6 Installer. You are presented with a list of software you can choose to install. You have the option of adding to that list or subtracting items from it by checking and unchecking the check boxes.

There are some items Apple seems to want us all to install. If you click the Custom Install button you will see three or four items which aren't shown normally. They include the system software itself as well as some Internet software (including the RAM and hard drive hog, Netscape Navigator.)

At this point, clicking Start will allow you to custom install each of these technologies. This is a good thing. Unfortunately you don't get to choose which of the technology installations you really want to customize the install of. This means that the Installer will open the standard install window of each and every one of those items forcing you to click OK to each splash screen, and clicking Install on each one until you get to the one you wanted to customize in the first place.

This wouldn't be so bad, except the sys-

tem software is one of those things many of us custom install and this forces you to do this for every item just to custom install the system. There are some benefits; it doesn't make you restart. Also there are ways around this, since you can always go directly into a folder on the CD-ROM, where you'll find all the standard Installers, and you can go the old route. This is something Apple ought to improve on in the next version of the Installer.

In addition, there is no way for the Installer to know how big any of the technologies are, so it is quite possible (one might even say common) to start an install believing you have enough space on your hard drive and end up running short!

While Apple has once again provided a way to deal with this in the Installer (see sidebar) it would be much better to give you the information they need up front. No one likes to come back to an Installer an hour later to a dialog telling them it still isn't finished.

Apple claims the problem of predicting space is related to how the old Installers and the new Installer work together. The saving grace? Once the Installer has stopped due to

lack of space, you can choose to skip that technology or stop the install and be presented with a list of those items which installed, those which didn't, and the one that it couldn't complete. You can then reboot, make more room, and install the remaining items or decide to not install some technologies if you so choose.

Lastly, there is no progress bar to show you which technology is being installed or how much longer until the entire install will be finished, only the progress on the technology currently being installed.

Let's Get to It!

The first encounter you have with the new Mac OS will be the Mac OS Setup Assistant. This application will ask you questions about where you are, what time it is, what printers you use, and then do you the favor of setting each of the relevant control panels, creating Desktop printer icons, and the like.

In addition you have the option of continuing on with an Internet Setup Assistant as well, which walks you through all the necessary settings for connecting to the Internet.

These Setup Assistants aren't the first

time Apple has ventured into the realm of automating routine tasks, Apple Guide (now renamed Mac OS Help) often provides prompting and, at times, a minor amount of automated help in getting certain tasks done. This does, however, mark the first time they have integrated into a place where every user will experience it. It is also the first time Apple has done anything to really help a new user set up their new machine.

This will certainly be an interesting area to watch in the future, however, overall it was an underwhelming experience.

The Finder

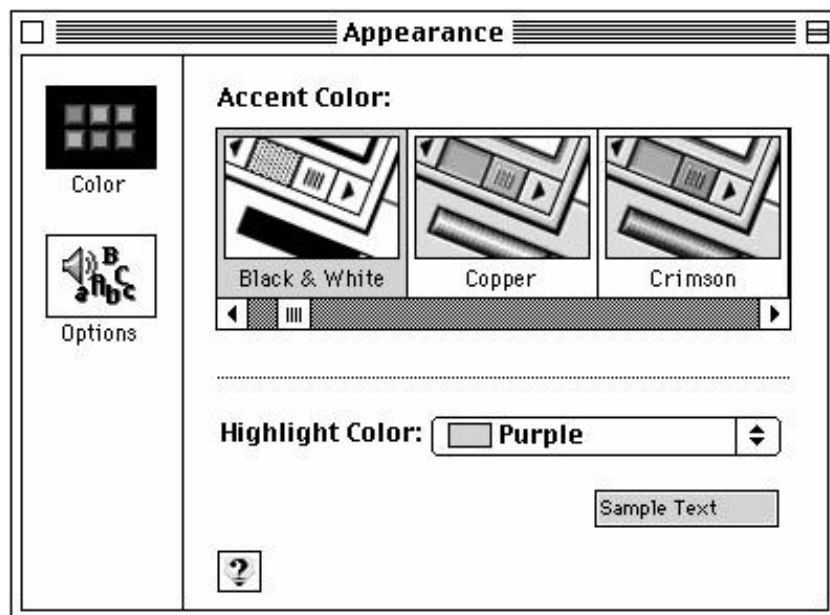
You'll first notice the new "Apple Platinum appearance." The appearance will be more than a little familiar to users of the Shareware extension Aaron, by Greg Landweber. When it seemed Apple would never get Copland out the door (who knew?) Greg recreated the new Finder's look from screenshots in Mac magazines, pixel for pixel, and created Aaron.

This Platinum appearance changes the look and feel of just about every element of interface in the Mac OS. Windows, pop-up

font, is now known as Charcoal. It received an overwhelmingly negative response from users who had a chance to experience it during development. In fact, there was a Web site, The Ugly Truth, collecting names on a petition for Apple to change the font.

It seems they didn't prevail, but, to be fair, as the font has evolved it has clearly improved.

major facelifts. Normal human beings can now clearly understand how to set up sharing privileges in the Users and Groups control panel. The other two File Sharing control panels, Sharing Setup and File Sharing Monitor, have been combined in a single tabbed control panel. Little else has been done in this area, however, and you must



menus, check boxes, radio buttons, sliders, progress bars, icons, and dialogs all have a



new look to them.

There is also a new system font. For the first time since the Macintosh shipped, you have the option not to use Chicago. The new font, once code-named the "Truth"

It's difficult to tell how the millions of loyal Mac users will react.

If you prefer the original Chicago font, it is still available.

But there's more to the new appearance than just gray windows, dialogs, and fonts, and that's good because these items really add little to no functionality to the operating system. In fact, it has been pointed out more than once that the gray text on a gray background reduces the readability of text, especially for those with visual impairments. Apple is quick to point out they have included a black and white appearance. This reverts the system to a look which is reminiscent more of System 6 than anything seen in this

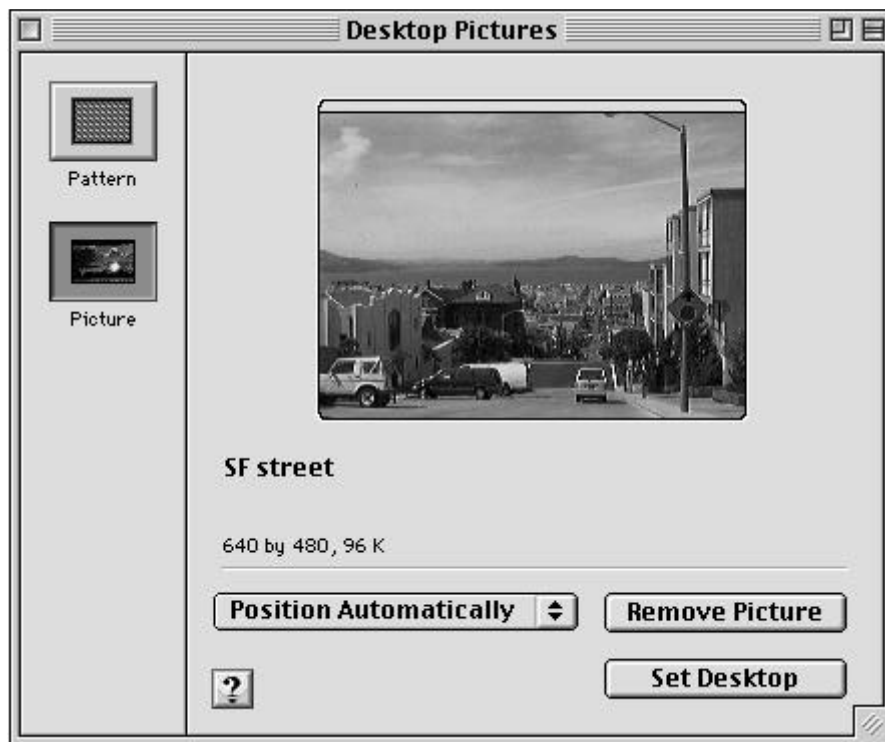
decade.

Apple has applied this new appearance to many, though not all, of its control panels and accompanying applications. In addition several of the control panels have gotten

still deal with multiple PowerBook control panels, separate networking control panels, such as PPP, TCP/IP, AppleTalk, and the new Modem control panel.

In addition to the new Appearance the new Finder is also significantly different under the hood. This Finder is 100% PowerPC native. While this isn't going to help you if you have a 68040-based Mac, PowerPCs should see some speed improvements in the various Finder activities.

On top of that the Finder is now multi-threaded. While this has no effect whatsoever on application use, it does mean you can now start multiple copies, empty the trash, launch an application or two, open a few folders with tons of items in them, and continue to move icons around the hierarchy. All of this doesn't come without at least cost, however. There can be a perceivable slowdown in Finder performance while many activities are taking place, but it's better than standing still altogether. This is pretty predictable as multitasking is asking the CPU to do several tasks at once rather than being allowed to concentrate on one at a time and having that one activity take advantage of the full power of the processor.



Personal Web Sharing, available via the Web for several months, is installed and ready to go with Mac OS 8. It's gotten pretty favorable reviews from the Mac magazines as a good beginners entry into serving

a very easy-to-use and powerful way to get information on the Net with nearly zero effort.

Desktop Patterns has been updated to keep up with the Jones' as well. The new control panel, Desktop Pictures, now allows pictures to be used full screen on your desktop, alone, or in combination with a Desktop pattern. If you drag a folder of pictures onto the control panel window it will randomly pick from the pictures found in that folder.

Location Manager, a utility to control several settings within many of these control panels, is now a standard install on any PowerBook. Meanwhile desktop Macs are still unable to use this unique and valuable utility.



files and Web pages on the Web. Apple doesn't seem to include any way of creating Web pages, however they do provide a unique feature called NetFinder. This allows you to simply drop files into a user assignable folder and people on the Web can view those files in a Finder-like interface. This is

The Finder's menus have changed as well. Several new menu items with command-key shortcuts have been added. These include "Move to Trash" (Command-Delete) which affects Finder icons, "Show Original" (Command-R) which exposes an Alias' original item in the Finder, and Labels



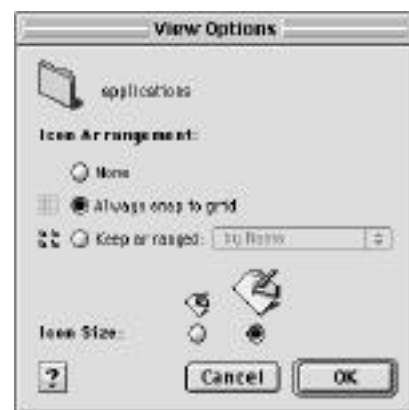
have now moved into a hierarchical menu within the File menu.

The Finder's menus have changed as well. Several new menu items with command-key shortcuts have been added.

It's a shame that Apple has decided to bury the labels menu item. Granted it is not the most highly used item in the Menu Bar, but instead of making it less accessible and compounding the problem it's too bad they didn't choose to improve on it by allowing more label items, an easier configuration (such as access to the preferences within the menu), and allowing multiple labels to be applied to a single item.

The Finder now has a "Preferences..." item in the Edit menu which contains some new items and some items which were previously control panels.

The View menu has been majorly overhauled and now includes a View Options menu item which presents a dialog (a modal dialog unfortunately) which allows you to customize the behavior of each and every window separately. This means you



can set a single window to have large icons in list view, turn on calculate folder sizes in just the windows you choose, and show only the columns you want in any window.

Somehow Apple forgot to provide system-wide settings, or even the ability to apply these settings to more than one folder for these options. You'll miss this if you create a lot of folders. As it installs, however, the Finder does keep all of the current settings

tem. It's only when the menus are singled-clicked on that they stick.

The look of the list view of a folder has also changed, adding a gray tint with white stripes, like lined paper differentiating rows. The sorted column gets a darker tint of

title bar of a window to the bottom of your Mac's screen. That folder will disappear, except for a small tab large enough for the title of the window. Clicking on this tab will make the window pop-up from the bottom of the screen like a drawer sliding open.

These tabs will pop-open just as spring-loaded folders, allowing you to continue down any folder within that window just by dragging an icon onto it. This makes for a very powerful set of tools to organize and access your files. Contextual menus are another interface element adopted from other operating systems such as Unix and, more recently, Windows. Contextual menus are activated by holding down the control key while clicking on an open window or an icon (or by using the second button on a mouse with more than one button). This presents a pop-up menu containing only menu items which are relevant to that item or items.

Contextual menus give easy access to commands frequently used on an item, as well as showing you which specific commands can be used. The drawbacks are twofold, however. First, there is no indication that contextual menus are available. Unless you already know to hold down the Control key you'll never find them. Secondly, floating menus (those not connected to the top of the screen) are generally more difficult to use as there are no built-in stop points as there are when you move your cursor to the top of the screen.

A contextual menu for a folder contains the items Help, New Folder, Close Window, Get Info, Sharing, the View by menu, and View Options. An icon contextual menu, on the other hand, presents Help, Open, Move to Trash, Get Info, the Label menu, Sharing, Duplicate, and Make Alias. Aliases include Show Original, and the Trash icon

for the folders you have created and any folders you create under Mac OS 8 should inherit the settings of the parent folder, so make sure you set your top level and Desktop to the settings you prefer!

The contents of this View Options dialog changes depending on whether you are viewing the window by Icon or by list.

Icon view presents a new option called "Keep arranged." This forces icons to arrange themselves by name, label, or other criteria that you choose. They remain in that arrangement until the setting is turned off, no matter how hard you may try to move them.

These settings are now shown to you by way of an icon or symbol in the header portion of the window.

Help? Well, sure, it's right there next to the Special menu (and in fact in the rightmost position of any application's menus). And it actually says "Help" now. Previously you may recall this menu was in the form of a small black question mark in a yellow square. It seems no one ever knew it was there, so Apple made it clear as day.

Sticky menus have been incorporated into the Mac OS. As opposed to the Windows implementation, in which the menus always stick open, the Mac OS menus act no differently than they did in earlier versions of the system. It's only when the menus are singled-clicked on that they stick. They must be used before you can truly see how graceful this implementation is.

As opposed to the Windows implementation, in which the menus always stick open, the Mac OS menus act no differently than they did in earlier versions of the sys-

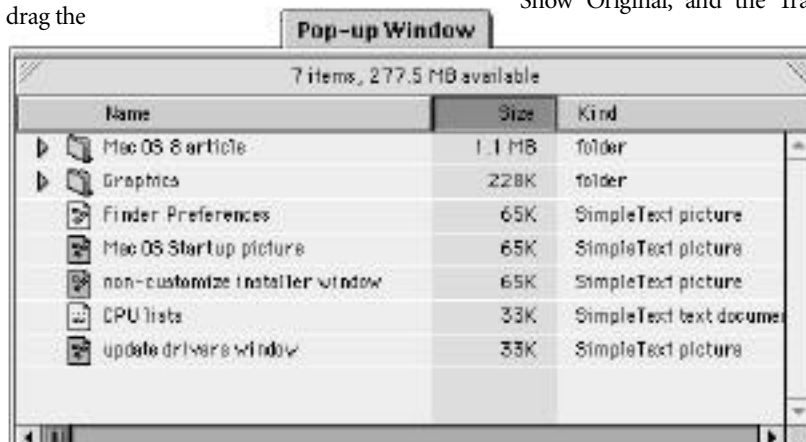
gray.

Probably the two biggest new features in the new Finder, however, are Spring-loaded folders and Pop-up windows.

Spring-loaded folders is a new Finder preference which lets you drag an icon over a folder, wait a user-set amount of time, and that folder will spring open before your eyes! This is similar to the commercial programs Pop-up Folder and Now Utilities, but differs in that while those show a hierarchical menu of the items in the folder, the Mac OS 8 opens the entire folder in whatever view it is currently set.

You can continue dragging into folder after folder as deep into your hard drive as you like. When you let go all but the original folder and the destination folder will close. This saves time and effort cleaning up the open windows left behind as you work your way through your hard drive's hierarchy trying to find the folder you were looking for.

Pop-up folders are yet another new Finder feature. Any folder can be a pop-up folder. You can simply drag the



includes Empty Trash.

Currently there are no commands which are only found in the contextual menus. In the future, however, Apple plans to allow companies to extend these menus with their own functionality and this may allow for things like spell checking, compressing, and similar commands which may be only available by this mechanism.

Other Cool Stuff

There are numerous other additions to Mac OS with the Mac OS 8 release:

- New folders in the System Folder to once again reduce the clutter that is slowly growing out of control. In addition to the folders you are used to, you will now find: Shared Libraries, Scripting Additions, Text Encodings, Application Support, Sounds, Voices, and more. Some of these are simply relocated from within the Extensions folder, others are new to the system.
- Magic Routing (the System's ability to put control panels and extensions into the right folder in the System Folder when you drop the items on a closed System Folder) has been extended as well, for the first time since this feature was introduced. The System can now recognize certain types of applications as belonging in the Apple Menu Items folder. Control Strip Modules will automatically be placed in the appropriate folder as well.
- Changing the volume, brightness, and contrast by the physical buttons on a desktop Mac or PowerBook now displays a visual representation of the levels on-screen.
- PowerBooks now sport a colorful new battery icon in the menu bar.
- This is the first system which is fully CHRP compliant.
- The Color Picker has been extended, providing new ways to choose a color including a new HTML picker (for picking Web-safe colors), a CMYK color picker for professionals, and a Crayon picker for color picking for the rest of us. In addition, there is a new "eye dropper" tool to allow you to pick your own color from anywhere on the screen.
- The Clean Up menu item no longer scatters your Desktop icons far and wide, but simply places them on the

grid spaces. (It still attempts to move Desktop Printer Icons to a default position however.)

- The Finder now handles thousands of files in a single directory smoothly.
- Finder scripting has been revised offering more functionality and access to many of the new features and attributes via AppleScript and Apple Events. (Take note that this may cause some scripts which interact with the Finder to stop working.)
- Typing ahead in a window now puts the items selected at the center rather than the last items in showing in the window.
- Apple's Text to Speech software now speaks alert dialog text.
- The new OS includes Mac OS Runtime for Java, for use with Java applets on the Internet or on your local machine.
- It also includes Cyberdog 2.0.

Should I or Shouldn't I?

Should you get Mac OS 8? If you have a PowerMac, the answer is unquestionably yes. While all the window dressing in the world may not be enough to put you through the work of upgrading a system (though fortunately this upgrade looks to be the smoothest one in a long time), there is a lot more to Mac OS 8 than the new look. Aside from the actual usability enhancements, which are more than window dressing, there is a lot under the hood.

Recently, the best reasons you can have to upgrade to a new OS release are speed and stability. Mac OS 8 provides both. If your Mac is based on the 68040 processor the speed advantage is certainly diminished, but like the upgrade from System 6 to System 7, while every aspect may not be faster by a stopwatch, the new features allow you to get more done, more quickly, and with less effort.

This operating system is likely to be the most rapidly and widespread adoption of any system, at least in percentage of installed base upgrades, ever, if for no other reason than the pent-up demand for change of any sort in the Mac OS.

With all the news about Rhapsody lately, it's reassuring to see Apple paying attention to the Mac OS again.

Mac OS 8 comes with the following technologies available in the Installer:

Mac OS Info Center
Internet Access software
OT/PPP
Mac OS Runtime for Java
Personal Web Sharing 1.0
QuickDraw 3D 1.5
OpenDoc
MacLinkPlus 9.0
Location Manager 1.0.1
Cyberdog 2.0
QuickDraw GX graphics init (not the printing architecture)
Text to Speech
Apple Remote Access
Open Transport 1.2
Personal Web Sharing (a personal Web server, intended for file sharing according to the Internet's TCP/IP protocols)
Mac Runtime Java (Apple's stand-alone Java runtime engine)
PC Compatibility software (MacLink Plus and PC Exchange)
Netscape Navigator
Claris Emailer Lite.

Also shipping with the System, but not available directly within the Installer are:

Microsoft Internet Explorer
Marimba's Castanet
PointCast

Places to get more information:

www.macos.apple.com/macos8/
www.macintouch.com
www.ogrady.com
and

Apple's Tech Info libraries Web site
Planet BMUG's Ask Apple conference

This article is a compilation of information gathered from many of the gurus of BMUG, particular thanks go to Peter Adler and David Schwartz. Much of the information contained in this article came from the many Mac OS news Web sites on the Internet 🐉

BMUG Meets MicroTimes

Number 17

by David Morgenstern

The Seventeenth Time Is the Charm

Medieval rabbi Bahya Ibn Paquda said, "Nothing accomplishes nothing." It's clear that this adage applies to BMUGers around the world. We keep doing things.

For almost 13 years, we've been a group that answers techno-hype with hard facts. We've always tried to give the best real-world answer to tough questions and raised the dander of many captains of the computer industry.

BMUG has been a source of reliable information before there were phone technical support and Web-based resources. Perhaps more importantly, we've tried to be a reliable place for a variety of people—technoids and new users—to help each other with computing problems.

That helping spirit finds many more outlets at today's BMUG. In addition to membership, there are many seminars, support clinics, and meetings at the BMUG office in Berkeley. We have our print publications. There's even a group that's fixing older Macs and getting them into the hands of needy people in the community. And our online groups are growing in strength and commitment. Fabulous. It's a great group effort.

For the past nine years, one of my BMUG duties has been to write a column about the Mac in "MicroTimes: California's Computer Magazine," a great 300+ page monthly magazine available for free in newsstands. The rag covers everything from the Internet to UNIX hacking.

Years ago, MicroTimes Editor Mary

Taking a gander at last
year's predictions it's
easy to see in hindsight
the long list of technolo-
gies that failed to make a
real splash in 1996.

Eisenhart came to BMUG with the offer of a monthly column about the Mac. The core BMUG activists thought the column would be a means to keep California members, and non-members, up to date on tips and news in between our semi-annual Newsletters. And we were correct. It's hard to imagine today with the Internet and Worldwide Web connecting everyone that BMUG then had only a single-line Bulletin Board Service. It was difficult to reach members outside the San Francisco Bay Area.

Since I had written several hard-hitting Newsletter articles, the others persuaded me that the column would be "a piece of cake," and all I would have to do would be to transcribe the weekly Thursday night meeting's question-and-answer session. The estimate was that it would take only a couple of hours to write. NOT.

As it turned out, none of this was correct. Instead, I had to sharpen my writing and reporting skills. This was a fine journeyman's assignment. I'm now working full-time at MacWEEK as a senior news editor.

However, the increasing demands on my time have grown and I recently decided to pass the column on to another writer. At press time BMUG Director Ann Wrixon was still looking for my replacement. It has been a great privilege to write under the BMUG banner for this time.

I thank the many BMUGers that have sent me personal stories and tips for the column. My special thanks go to Raines Cohen, Lorca Hanns, Ron Hipshman, Stephen Howard, Robert Lettieri, David Schwartz, and Ann Wrixon.

This article is a compendium of the last half year's columns, so some of the bytes and pieces will be passé and old hat to you. We all know how quickly the Macintosh scene can change. Planet BMUG is a great place to check up on the latest and greatest. Long live BMUG and the Mac!

MicroTimes, BAM Media Inc., 3470 Buskirk Avenue, Pleasant Hill, CA 94523. www.microtimes.com. 14 Issues, US: 1st Class \$65, and 4th Class \$35. Overseas Surface \$50 (6-10 weeks).

January

This is the month when BMUG info-maniacs dig through the dark recesses of their sock drawers and dust off the crystal ball for a look at the forthcoming year. Setting these visions down in writing is a brave act, since it's more than easy to get things wrong; in fact, it's a requirement. But

the BMUG braintrust never shirks from a dangerous assignment.

Onward!

Easy to Be Wrong

Taking a gander at last year's predictions, it's easy to see in hindsight the long list of technologies that failed to make a real splash in 1996. The Talmud says: "The heart of virtue is good intentions," however, some of the forecasted entries may have arrived too little and too late.

While the Internet was the boffo story of the year, most users connected with 28.8-Kbps modems. The expected cable modems and fancy services fizzled in a big way. Although some set-top boxes were sold at the end of the year, the announcements were scattered among news stories of big telecom and content companies pulling back from the market.

Other no-shows from 1996 were Mac OS models built to the PowerPC Platform standard, also called the Common Hardware Reference Platform, or CHRP. The machines will run several operating systems, including the Mac OS and Windows NT. Although several Mac clone vendors expect to introduce units in the spring, the PPCP boxes may not ship in volume until the second half of the year.

Mac software also had more than its share of delays and disasters. Apple executives pulled the plug on the Copland operating system, which was expected for beta release in early 1997.

The promising cross-platform OpenDoc component software technology also ran into some potholes. The consortium of IBM Corp. and Component Integration Labs Inc. oversold the technology. On the Mac side, the containerized version of ClarisWorks will not ship until the summer, Claris said.

In addition, software developers found creating small "parts" more difficult than expected. A year ago Apple said that 300 OpenDoc parts, also called Live Objects, would be available at January's Macworld Expo in San Francisco. In November, only a dozen vendors plan to ship parts at the show.

What can be drawn from these events? Certainly the delays show that as computer hardware and operating systems become more complicated, they are tougher to engi-

neer. Duh!

Even worse, a series of small delays can add up to a whopper of a stall. Look at the problems over the past year for the Digital Video Disc players, and the computer drive called DVD-ROM. It will someday soon be the replacement for CD-ROM mechanisms.

First there were many technical delays as engineers fought over the specifics of hardware and software formats. Then lawyers got into the act with copyright and payment concerns—the drives will eventually migrate to systems later this year.

In addition, 1996's events prove it's one thing to promote a piece of hardware or software, and yet another to implement and market it. Introducing a new technology is no piece of cake.

Something that should be on the top of every developer's list for the new year should be quality and ease of use. While the Mac is easier to set up and use than other computers, it could and should be much easier. This is not an abstract issue to me—I speak as a father handling remote tech support calls from a college student with a new Mac clone.

Something that should be on the top of every developer's list for the new year should be quality and ease of use.

Once a system is set up and stable, it usually runs fine. But that peace comes after dealing with extension conflicts, memory bugs, non-existent modem scripts, Open Transport problems, printing problems ... oy!

Things have to get better. Apple—make it so!

Prospective Proclamations

Often found sitting at the back of meetings, the BMUG braintrust is well-connected into the Mac world and familiar with trends that affect the entire computer industry.

But it would be best not to bank on our prognostications. They are offered only for entertainment purposes.

Here are this month's wave of the predictions:

- Stephen Howard, former Chair of BMUG's Board of Directors and former MacWEEK Executive Editor/News. He can be reached at stephen_howard@zd.com.

In early 1997, Apple will announce a new OS strategy that creates a "Mac OS

NT"—a new-from-the-ground-up modern operating system that promises to be the platform of the future. BeOS technology will be the heart of this new platform, though Apple will do as much as it can to downplay that truth. [Be Inc. is a Menlo Park, California-based startup that sells a multiprocessing, PowerPC-based box with a proprietary multitasking operating system. The BeOS will run on Mac hardware in the first quarter of 1997; Power Computing Corp. recently licensed it and will bundle the software with its Mac clones.]

Apple will promise to have a 1.0 version shipping before the end of the year, and it will. However, it will take three or four years for new shipping hardware and software to be universally built for the modern OS—much longer than anticipated.

In the meantime, Mac OS 7.7 (code-named Tempo) will ship this summer and will rejuvenate the Mac market and customer base. The new, faster Finder and new user interface will impress everyone. And while there will be many esoteric arguments at BMUG meetings and elsewhere over why a new, modern OS is needed, Mac OS 7.7 will satisfy many users' hunger for change.

Also in 1997, Apple will go on an investment and company-buying binge to acquire ready-made OS technology. This process will acquire for Apple new software for the future OS and new tricks and gew-gaws for Mac OS 7.x.

Mac vs. PC arguments will get to be the worst ever as 300-MHz and 500-MHz Macs ship from Apple and clone makers a long time before Wintel boxes with similar clock rates arrive. Judging performance across systems and across platforms will be harder than ever.

Mac Clone PowerBooks will arrive, and they will be hugely popular. However, there will be numerous trade-offs in battery life, compatibility and weight, that will make people re-think the wonderfulness of clone laptops. But their arrival will still increase variety in the marketplace and let users buy portables when they want to, instead of waiting for supplies.

The first PowerPC Platform machines will ship with both Mac OS and Windows NT running. The machines will be slightly more expensive than Mac-only clones, and there will be few Windows NT applications recompiled for the PowerPC chip, so users

Users who have been on the Web for a few months are realizing that the noise-to-signal ratio is too high.

will whisper a collective "so what?" However, vendors will rush in to compete with each other over PPC boxes, leading to dropping prices and good bundles. Most of these will be aimed at the most technical of users.

On the Internet front, Netscape will return to giving away its Web browser for free during 1997 after it launches its Communicator suite. Also, a new generation of browser companies will emerge by the end of the year, offering specialized features in a few areas.

Java Shareware will emerge because the electronic distribution over the Net and the ability to run on any computer make it the natural home for low-cost, hobbyist efforts. This will be the first mainstream success of Java.

Corporate users will jump on the Java bandwagon for custom-built, in-house software, but the first allegedly mainstream commercial applications written in Java will be strange creatures with very limited features in some areas, goofy user interfaces and specialized functions.

The first generation of 56-Kbps modems will work fine, despite the naysayers, and the prices will drop very quickly. The first generation of 500-Kbps cable modems will not appear, leaving lots of users wondering whether to buy a new, traditional modem or wait until 1998.

• **Peter Linde**, Chair of BMUG's Board of Directors and CEO of The Linde Group Inc. (a Berkeley, California-based computer consultancy). He can be reached at peter@lindegroupp.com.

The Web is dead! Well, not yet, but it

sure is dying. Expect to start seeing more of a backlash against the hype surrounding the Web. Already I have been in movie theaters in which the crowd has booed when a URL for a movie gets posted at the end of a trailer. People are just getting sick of it.

Users who have been on the Web for a few months are realizing that the noise-to-signal ratio is too high. The graphics mostly suck and few people creating pages understand anything about user interface design. Even simple layout skills seem to be a mystery to many page "designers."

Will the Web really die? Definitely not! There are some great, useful sites out there for which the Web is a fantastically appropriate medium. Any software company that does not distribute software updates and technical support from their Web site is doing themselves and their customers a disservice.

However, will big companies continue to shell out tens and even hundreds of thousands of dollars for external sites that get an ever diminishing return? Probably not. But they might.

Considering that somewhere between 8 and 15 percent of the U.S. population is currently able to surf the Web and more and more people are getting on each day, companies may confuse the increasing flow of new people with an increasing audience. Only a careful analysis of logs (far beyond the abilities of most decision makers in corporate marketing department, and far away from the interests of most Web site designers) will reveal that while more people may be visiting a site, there are few repeat visitors to most corporate sites.

So, I predict that the corporate external site is a dying breed. However, you don't have to be Nostradamus to predict that Intranet sites are taking off and here to stay. Using the Web for communication of valuable information (as opposed to marketing tripe) is what makes the Web so exciting.

This is why sites like Salon, HotWired, MacInTouch, and most Intranets will be around a few years from now—because they provide real value with minimal marketing noise.

• **David Morgenstern**, BMUG Cheerleader and News Editor at MacWEEK. He can be reached at david_morgenstern@zd.com.

The currently unbalanced ratio of virus

attacks for Mac and Windows platforms will widen next year. Macs will remain mostly untouched, while Windows viruses will continue to grow out of control.

The twisted programmers will run out of holidays and historical personages to name their logical time bombs after and they will link viruses to movie stars and cartoon characters. After it becomes fashionable to have a particularly bad virus named for you, celebrities and publicity agents will hire programmers to make and distribute personalized viruses.

Look for the bidding for art and content for Web sites to heat up. Forward-looking companies will seek paintings and sculpture for users to display at home on groovy wall-hanging super-high-resolution 3-D monitors.

The content kingpins will make deals that let everyday users license home photos automatically at film developers. A similar deal with copy machines in Kinkos will let users immediately sell items being Xeroxed. Sotheby's will get into the act with high-profile auctions for rights to children's drawings.

• **Ann Wrixon**, BMUG Executive Director.

1997 will be the Year of the Clone Maker. I believe clone makers are going to set the stage for lower prices and higher quality for Mac systems. They will significantly increase market share for the Mac OS.

Users groups will have a stronger voice in the computer industry as they consolidate into fewer larger, but stronger, groups.

Apple will continue to turn around as they cut costs and, hopefully, develop a coherent and solid strategy development of the operating system.

February

In the waning daze of 1996, Apple put together a deal for its future operating system—perhaps its entire future—with NeXT Software Inc.

Forgoing last-minute holiday shopping excursions, BMUGers around the globe huddled around their monitors for the latest news off the Net out of Cupertino.

This month I'll give a run-down of Apple's plans for the new operating system, which were detailed on the first day of the Macworld Expo in San Francisco (and past my deadline). Next month, we'll take a look

At the last moment Apple picked dark horse NeXT, and paid about \$400 million for the whole company

at some of the great products unveiled at the show.

NeXT-generation teamwork

During the last half of 1996, the rumors about Apple's search for a new operating system kept gaining strength. The company put the kibosh on the Copland OS last summer and was on the lookout for a replacement for System 7.x.

The future OS would provide the many "multi" features of a modern operating system, including multitasking, the ability to do many things at once; multithreading, the easy way to do those many tasks; and symmetrical multiprocessing, the use of many processors at once to divide up tasks automatically. Some of these capabilities are typically found in workstations—and Windows NT.

Apple reportedly had a handful of choices: Windows NT (hello!), Sun Solaris, a Java-based OS, NeXT Software Inc.'s OpenStep, and Be Inc.'s BeOS.

Be was the front-runner for months, with an OS that will run on PowerPC-based Mac hardware with PCI bus architecture. Clone vendor Power Computing Corp. last November inked a deal with Be to ship the OS with its machines later this year.

At the last moment, Apple picked dark horse NeXT, and paid about \$400 million for the whole company. The big guy at NeXT is a familiar face to BMUGers—Steve Jobs, the father of Apple and the Macintosh.

The deal was greeted with confusion and more than a dash of anxiety by some BMUGers at meetings and on our Planet Bulletin Board Service. After all the fuss over BeOS, they worried if the new operat-

ing system would run on their Macs and if it was a good choice.

Even more important was the perceived abandonment of the things that make the Mac the Mac. "If I had wanted a NeXT, I'd be looking at a NeXT, instead of a Mac," said one longtime member after the deal was announced.

BMUGers paced the floor and counted the hours until the Expo hoping that Apple would cough up some answers.

Keeping on Track

And answers came aplenty in CEO Gilbert Amelio's seemingly endless keynote address and afterwards in a series of long briefings by corporate executives. Other than the wish for a pillow, I had few complaints of the lengthy meetings. After years of BMUG meetings, I'm used to sitting through demo after demo, ad infinitum. Sit and ye shall receive.

Apple said it will take a two-track approach for its operating systems: the first will be at least a couple of years more of System 7 versions, and the second will be Rhapsody, the NeXT-based OS.

Rhapsody also has twin sides. It will offer all of its modern services to new applications written to run in its NeXT-based "Yellow Box" architecture. In addition, the operating system will run current System 7.x applications in a "Blue Box." Years ago, Blue was the code-name for System 7.

According to Apple, the Blue Box will not be an emulator, like SoftWindows by Insignia Solutions Inc., or the low-level 680x0 emulator used inside System 7 for non-PowerPC-native code. This scheme might slow down operations. Rather, Rhapsody will integrate a native version of the stand-alone System 7.

"The Blue Box will run all of our legacy applications at equal-to or better-than performance than they do today," said Amelio.

In addition, Rhapsody will feature a new user interface that will combine elements from both NeXT and Macintosh parents.

Apple also provided some details of its next three System 7.x updates. They all have musical code names.

In July, will come Tempo; followed by Allegro, in January 1998; and Sonata, which is slated for release in mid 1998. The first version of Rhapsody is due in January 1998

and will offer limited compatibility with System 7.x programs; Apple expects improved compatibility in a version set for the middle of 1998.

Apple said Tempo will include Cyberdog 2.0, a Java runtime virtual machine, and the company's personal Web server. It will also integrate several Copland technologies such as a multithreaded Finder and some neat user interface features. However, the Appearance Manager, which would have allowed users to easily customize the look and feel of their Desktops, will not make the scene.

The features found in any current stand-alone version of the System 7.x OS will lead the integrated Blue Box software, Apple said. For example, the Blue Box version in mid-1998 will have Allegro features, rather than the set from the concurrent Sonata.

"We're going to preserve your investment," Amelio told users during his keynote speech. "It will be a little reminiscent of PowerPC and 680x0; I think Apple did that last transition quite well. It can be done, and we're going to do it again."

Announcements and white papers on the strategy can be found at <http://www.next.com>.

All of this music sounds in the groove! BMUGers can't wait to start playing the tunes.

Keynote Quibbles

Everybody under the sun seemed to have a bone to pick with Gilbert Amelio's keynote address. It was too long (2.5 hours) and rambled (rumor mongers said the slides were mixed-up and Steve Jobs was late so Amelio had to ad lib). Perhaps the critics were due for another hit of coffee in the early afternoon.

The crowd went crazy as Jobs poked his head on stage. He has both charisma to burn and the mantle of Apple authenticity—even though he's been out of touch with anything and everything for more than a decade. He's now the symbol of Apple vision, not the shaper. Still, this is not necessarily a bad situation.

Unlike Microsoft, which has immediate and ever-present touch with its founding vision (for good and for ill), Apple founders long ago stepped, or were pushed, into the background. Even a flavor of the real thing may be welcome.

However, some keynote observers were baffled by the appearance and introduction of honored guest Muhammad Ali, who capped the host of luminaries, including Sinbad, Peter Gabriel, and Gregory Hines.

Apple tried to make a connection between the Macintosh and creativity. Many people know that musician Peter Gabriel is a longtime Mac user. Film star Sinbad is a power user and member of the Los Angeles Mac Users Group (LAMG).

However, Ali does not fit into the Mac-picture for the attendees. Many of them asked me, "what's he doing here?"

The critics ignore the time-honored practice of introducing celebrities in the audience at almost any large gathering. But more importantly, they also ignore Ali as a symbol of the comeback and overcoming great odds.

From a modest background, Ali won the Olympics and became heavyweight champ after a jail term during his prime years. He was counted out many times, but with energy, purpose, and great will, kept on coming and triumphed.

Even though he's now ill, he's not hiding his face. His wave to the Expo crowd should have been seen as a call to action for Apple and Mac faithful, an example and even a blessing.

And it was great to see him in person. It's hard to tell I'm a fan, huh?

Futur e Mac D irections

Last month we had a slew of prognostications for this year by BMUG technomavens. Of course, some of the predictions from that time—done in the middle of December—were soured by the NeXT deal. Tough luck. Like most of the industry, they picked Be to be the player with the inside track. NOT.

Here are this month's wave of the predictions:

• **Bernard Aboba**, *Microsoft Windows networking guy, author of The Online User's Encyclopedia and former BMUG Board member.*

1997 will be known as the year that the Web became more of a broadcast medium. We'll have a significant move toward "push technologies," which are mechanisms that let Web sites send you information, that you probably won't want. For example, your

mother-in-law's Web site might "push" information on you relating to vitamins or cholesterol, or how to bring up your children. Perhaps it's time to get an unlisted email address?

The book "Startup" will be made into a movie, featuring Tom Cruise and Madonna in the leading roles. The movie will be a hit, generating more revenue than the original companies did.

A new generation of Internet IPOs will hit the streets, touting the value of their "movie rights," should the technological or market concept underlying their business plans not pan out.

Spam. For years I've been predicting the rise of junk email and spamming of Usenet, but 1997 will be the year it really gets out of control. Bill Clinton and Newt Gingrich, outraged by the huge volumes of "Making Money Fast," weight loss, and porn email, will jointly sponsor anti-spamming legislation, which will pass. Unfortunately, after the fact, the legislators will notice that the bill inadvertently outlaws email altogether.

Apple's NeXT deal will bring a rush on NeXTstep development books, many of which had been gathering dust for years on the back shelves in discount bookstores. People will also start digging out old NeXT machines and software that had been buried in the closet.

These boxes will be affectionately renamed "The Apple IV." Apple will ship MacStep in time for the next Macworld Expo, but the first version will only have limited compatibility with current Mac OS applications. As a result, even though software developers, such as Adobe, will sign up to create applications for it, the new operating system will only sell in volume to enterprise customers, and people looking to set up Web sites.

Apple will embrace Java in a big way. They will position MacStep as the premiere Web development environment, buttressing their case with a version of Internet Foundation Classes optimized for MacStep.

Claris will be re-oriented toward producing applications for MacStep and Java, including applications for the Newton, which will also get a Java jolt. Apple will also go after Sun's Netra line with their own Web server offering, and within a year it will surpass the Netra in sales.

• **Scott Beamer**, *consultant, BMUG business maven, and former Board member.*

1997 will be a year of confusion for Mac users. Many zealous Mac owners just now recovering enough nerve not to make a transition to Windows, may backslide (or at least drive to the headache clinic) when they hear Apple may be abandoning the Mac OS.

And how can we trust Apple? In rapid succession, Apple announced they may ship a server with Windows NT on it, and then they trash their next major announced system upgrade. Headlines in the press speculate that Apple will buy Be Inc.'s BeOS and use it as the Mac's next operating system. Don't forget that the major Mac clone maker, Power Computing will be shipping two operating systems on their units, the Mac OS and BeOS.

The hipper Mac users are trying to schedule OpenDoc, Java, and Cyberdog into their software arsenals. Oh, and is Firewall (I mean 1394, or FireWire) ready for prime time, this year?

The decisions are tough. Those users who tried to put a new box for their family under the tree may have walked out of the store empty handed and boggle eyed, unsure whether to buy a Macintosh, Mac clone, Pippin, eMate 300 (Newton on steroids), or Network Computer.

It seems the technology is a rich mix as the new year begins, but will we have some straightforward solutions before the year ends? Truth will be stranger than fiction this year.

According to Ameliq
Apple has instituted new
quality-assurance
programs to halt the
seemingly endless
problems of last year

Perhaps I'll stay in bed and pull the covers over my head. Wake me up next January 1!

March

This month, the column will take a look-see at several recent happenings around the Macintosh community: the assessment of the platform's standing by Apple CEO Gilbert Amelio at the shareholders meeting in February and a selection of products from San Francisco's Macworld Expo in January.

Onwards!

Can the Clothes Make the Man?

I recently had the opportunity to see Amelio in action. He faced down an angry crowd of about 250 investors at the annual shareholders meeting in Cupertino.

Some of the investors were furious at the year-long drop of the company's stock price—it hit a ten-year low the week of the meeting. Also the \$120 million loss for the previous fiscal quarter helped fuel the contentious feelings.

In the audience were many employee shareholders with an ax to grind over reports that Amelio would be cutting projects and laying off staff.

Several contentious investors asked hard questions about proposals to grant Apple corporate brass with stock options; some of the votes were for Amelio's work last year—he took the job after last year's shareholder meeting—and others were for this year.

Some of the complaints were tempered by the fact that the options begin to make any money only if Apple stock passes \$27 and the big bucks kick in if it climbs past \$50 a share. The shareholders were all willing to let Amelio have a big payday if the stock gets out of the cellar. "We'll all win," said one investor.

But the raucous tone changed after Amelio walked out on stage and gave an hour-long presentation that appeared to mollify the crowd.

He ran down five crises—and their solutions—that faced the company: liquidity problem that "fundamentally threatened" the company, terrible product quality, a nonexistent OS strategy, an unbusinesslike corporate culture, and a fragmented organization.

He said that Apple had improved its cash on hand and inventories. Amelio also said he was unifying the global company's financial tracking systems; it had seven different systems that couldn't talk to each other.

According to Amelio, Apple has instituted new quality-assurance programs to halt the seemingly endless problems of last year. He said repairing the QA problems cost the company hundreds of millions of dollars. Even worse, the hardware and software bugs lead to a loss of confidence in new and longtime Mac customers.

According to Amelio, Apple has instituted new quality-assurance programs to halt the seemingly endless problems of last year.

Revealing some of his decision-making process for the operating system strategy, Amelio said when he took office, Apple had no plans for any systemware updates after Version 7.5.3—except for further delays to Copland. Hello!

He said the combination of the Rhapsody OS (rolled out at Expo and covered in last month's column), the transition strategy and the scheduled quarterly release of Mac OS 7.x updates will take care of that crisis.

Another problem that had reared its head more and more over the past year was Apple's "unbusinesslike" corporate culture, Amelio said, pointing out that there was little accountability for managers and project direction. "I was astounded at the lack of cohesion between the different units," he said.

Now Apple has a more logical management structure, Amelio said, and a new means to measure performance. He said the company must strike a balance between its traditional stress on creativity with proper business practice: "in some areas excessive creativity undercuts our business case."

Finally, the CEO said that Apple must pare down its many product lines, especially the unprofitable ones. He said top management will review all programs in February and then cut about \$400 million in research and development expenditures, operations, and overhead.

"The key to our future success will be to pick our targets and put enough resources behind the things we do to allow them to prosper," he said.

In an hour-long question-and-answer session with investors after his speech, Amelio said Apple will ship the Newton-based MessagePad 2000 and eMate 300 in March. But the future of many projects, even cool ones like the handhelds, may be sold in the forthcoming restructuring.

I thought that Amelio was very honest and open. He had a heavy dose of focus and charisma, which were missing during his keynote address at Expo. And he needed all the help he could get at this important meeting.

The difference in a month? It may be that Amelio has a better handle on the crises and solutions. Or perhaps it was a switch in style.

At several events last year, Amelio tried to fit in with Apple style and dressed down with a collarless shirt or even a t-shirt. It didn't work. But in February, he was wearing a smart super-tailored suit and had a boffo performance.

Let's face it, Amelio is a suit. And that isn't bad. He should be proud of his nature.

The investors appeared to buy Amelio and his plan. Perhaps Apple needed a techno-suit to show them that cool things can get done, but in a businesslike way.

Expo

The usual news from this year's Macworld Expo in San Francisco was dominated by Apple's deal for NeXT Software Inc. and the plans for Rhapsody, its next-generation operating system.

As usual, I found it an exciting show, the floor packed with enthusiastic Mac users and interesting products.

The latest BMUG Newsletter was available at the booth. This edition was more than 450 pages, packed with great stuff, including reviews of hardware and software from real users, and our Choice Products list.

This edition of the semi-annual publication features sections on mobile products, and foreign-language computing, as well as several articles from our Japanese members. The slight catch is that you have to be a BMUG member to get the Newsletter, but it's well worth it (said as a 10-year veteran BMUGer and cheerleader).

As usual, I was interested in odd-ball utilities instead of the big ticket items. Here are some of the winners:

- Have you ever saved a document and then wish you hadn't? 6prime Corp. calls this feeling Saver's Remorse.

However, the company has come up with a fix called Rev, its \$49.95 utility that can track a file's history. Users can set it to automatically capture the file every time it's saved or closed or at preset times.

The program has a little database that tells when each version of a document was created. Similar to the action of Find File, you can return to an older version by dragging it from the database window onto the Desktop.

- The SCSI interface is one of the under-appreciated advantages of the Macintosh. It

It goes without saying
(although I will say it
anyway) that everyone
should back up data
before proceeding with
any major system
software installation.

arrived on the scene with the Mac Plus, the interface's first use on a desktop computer.

As hard drive capacities increase, users can swap out an old SCSI drive and put in a bigger one. But the replaced drive isn't useless; it's easy to buy an external case and simply connect the old drive into the port on the back of the Mac.

Some new desktop machines and PowerBooks now use an Enhanced IDE interface for hard drives instead of SCSI. E-IDE is the most common interface for primary storage in Windows PCs. However, these PC-flavored hard disks can't be plugged back into the system like SCSI versions. They may be cheaper for Apple and Mac cloners to buy—reflected in the lower initial purchase price to you, since the E-

IDE drives cost less than SCSI models—but there's a loss in flexibility when upgrading.

At Expo, TECHcessories showed an interesting answer for this problem for IDE-based PowerBooks. Slated for release in March, the \$149 MiniPack-PCMCIA kit will let users put a 2.5-inch IDE hard drive in a small external case and then plug it into the PC Card slot. It will come with the enclosure, Type II PC Card adapter and driver software.

- Longtime BMUGer Hans Hansen liked Newer Technology Inc.'s SpellTools 1.2. As you might guess from the title, the program is a spell checker.

Previously Shareware, SpellTools lets you use the application in any application. It can check a selected word or an entire document.

SpellTools asks you to find programs on your hard drive in which you want the checker to appear; it then creates a "plug-in" for the application. The \$49.95 software uses a 68,000-word dictionary and comes with pre-built plug-ins for many popular applications.

However, SpellTools does more than spell checking. It can strip out extra returns and spaces as well as remove the > symbol used in email message to signify a quotation from another message.

Another pair of interesting features are audio proofing and Rubber Stamper, which saves often-used phrases that can be "stamped" into a document. SpellTools places itself as a small floating pallet in the selected application, so it's convenient to grab the stamped text strings.

The ProofListening capability uses Apple's speech-to-text technology to let a user or editor hear mistakes, instead of relying on the eyes. The medieval rabbi, Jonah Ben Abraham said, "The ear is more useful than the eye for knowledge."

Bytes and Pieces

Here's a bit of fun for Mac trivia buffs and especially for owners of machines using the code-named Tanzania motherboard design, such as Apple's 4400, and clones from Motorola Computer Group clones and mail-order vendor APS Technologies Inc.

There's a hidden trick inside: Press the Command, Shift, T and 3 keys and then double-click the resulting file.

Newer Technology Inc.

Wichita, KS

<http://www.newertech.com>

TECHcessories

Division of Sicon International

San Jose, CA

<http://www.techcessories.com>

Aladdin Systems Inc. of Watsonville, CA, in May bought 6prime Corp.'s Rev.

Aladdin Systems

Phone: (408) 761) 6200

Fax: (408) 761-6206

info@aladdinsys.com

www.aladdinsys.com

April

Nowadays, time seems to stand still for Mac-philes. They wait for the announcement from Apple CEO Gilbert Amelio of cost cutting measures and the layoffs that will follow. Over the years there's been a steady stream of BMUGers heading down the freeway to work in Cupertino—our hearts go out to any friends caught in the current mess.

And then there are concerns over Apple's forthcoming gloomy financial results for its second fiscal quarter, due at the end of March. The expected loss will include more than \$300 million for its purchase of NeXT Inc. and charges for the layoffs. Ouch!

Instead of pacing the floor and wearing a channel in the rug, I've employed a three-part strategy to ease the mental strain of waiting: frequent visits on the Planet BMUG electronic service to check up on the latest happenings, perusals of the fine print found in the latest BMUG Newsletter, and watching Perry Mason episodes recorded on video. And there's an added bonus; they can all be done while sitting in bed with a PowerBook on my lap.

Onward!

Harmonious Tidings

Apple recently released the latest version of its operating system, Mac OS 7.6, code-named Harmony. The whole kit and caboodle comes on a \$99 CD-ROM; owners of the previous System 7.5 can upgrade for \$69.

It conveniently puts into one package a passel of system add-ons, utilities and applications—perhaps the reason why it's been a good seller.

Some members of the BMUG know-it-all peanut gallery felt that the CD-ROM was not really necessary, since most of Harmony's pieces are available separately off the Web. However, anyone who's had to install a previous version of System 7.5 and then run a series of updaters knows that the price of convenience shouldn't be sniffed at.

Acknowledging the seemingly countless pieces of software that go into the System Folder, Harmony's Installer is much improved over the minimalist older versions. It guides users, asking them to read help files and repair disks before starting the installation.

The new release also asks users to update hard disk drivers before the installing Harmony. Since Apple's storage utility only can update Apple-labeled drives, you should be sure to get the latest version of any third-party formatting software and load new drivers before proceeding with the installation.

It goes without saying (although I will say it anyway) that everyone should back up data before proceeding with any major system software installation.

The Harmony installer gives users two options: to overwrite the current items in the system, or to create a brand new "clean" one. Employing the latter scheme would mean that all preferences, third-party extensions and control panels would have to be copied over later. This time-consuming task can be a real pain in the neck, so unless you know what you're doing (and even then) choose the regular installation.

But System 7.6 isn't for everyone. It needs a "32-bit clean" machine, with a 68030 or better processor. The old dirty models include the popular Mac IIcx and SE/30.

According to Apple, Harmony fixes a number of bugs and uses a faster virtual memory scheme. It also comes with the improved, more-reliable version of Open Transport, which includes Point-to-Point Protocol 1.0.

The update also supports the new clones based on the Tanzania motherboard design, such as Motorola Computer Group's StarMax models. Of course, it also

works with machines offered by other clone vendors, just as it works on most older Apple Macs.

Users should note that Apple now separates its hardware releases from software updates. New machines are not tied to the schedule for system software and vice versa.

Started last fall, this strategic change means that new Apple models and Mac clones may not use the latest off-the-shelf system release. Although everyone thinks it's always best to run the latest and greatest systemware, it now may not always be compatible. Instead, the units will have to wait for the next quarterly update for support.

t's Easy to C

Last November, Apple said that it had uncovered a serious bug in an extension called the CFM-68K Runtime Enabler. The CFM stands for Code Fragment Manager and it's needed by some applications and systemware on older Macs that run a 680x0 processor instead of the PowerPC.

The problem caused random crashes and hangs that could cause users to lose data. Apple recommended that users disable the extension via the Extensions Manager control panel. Harmony stopped the extension from loading altogether.

The CFM software is needed by Apple's Open Doc, LaserWriter 8.4 driver, Media Tool and Telecom Software 3.0 or later. Some of the popular third-party applications that use it are America Online 3.0 and Microsoft's Internet Explorer 3.0. The problem only crops up on 680x0 Macs, not on PowerPC-based Macs.

With the CFM-68K Runtime Enabler, developers can more easily write programs that can run on both older Macs with 680x0 processors and PowerPC-based models.

First introduced with PowerPC-based Macs, CFM lets applications share code through shared libraries. Take a peek into the System Folder of any Power Mac and you will find scads of them; a library usually has a "Lib" at the end of its name. Shared libraries can also trim the memory requirements of programs.

Since the scheme worked for the new Macs, Apple made a version for older models, hence the "68K" designation. It works with System 7.1 and higher.

In March, Apple released Version 4.0, which fixes the bug and is recognized by

Harmony, or System 7.6. It also comes with ObjectSupportLib version 1.2.

Short Sightings

Apple has been moving many of its information sources onto the Web. Here are a pair of sites that you might find useful:

- Power Macintosh (<http://powermacintosh.apple.com>) has lots of marketing information on various flavors of desktop Power Macs. In addition, the page has announcements on rebates and special software bundles.

- Technical Support Online (<http://support.info.apple.com/tso/tso-home.html>) is Apple's primary source of information for all its products, from portables to peripherals. It has Frequently Asked Questions (FAQs) and discussion groups, as well as the latest software updates.

Bytes and Pieces

Here are several items that recently crossed the transom of my mailbox.

- Many users have reported problems with AppleVision 1710 and 1710AV monitors over the past half year. Apple fixed the problem for units rolling off the production line and finally came up with an Enhanced Customer Support Program (ECSP) for earlier users.

Monitors covered under the program include serial numbers greater than SG522xxxxxx, and less than or equal to SG628xxxxxx. If you had to take the monitor into the shop after the warranty, then you should call 1-800-SOS-APPL. There's also a Web site for the subject at <http://support.info.apple.com/support/1710.html>.

In addition, users that bought extra AppleCare for the 1710 will receive a refund by the end of April, Apple said.

Many users have reported problems with AppleVision 1710 and 1710AV monitors over the past half year

Many users have reported problems with AppleVision 1710 and 1710AV monitors over the past half year.

- Some users reported a minor problem with the hard drive in some PowerBook 1400s. Apple said the issue has been resolved with shipping models and will not corrupt data.

The problem crops up when one runs Apple's Disk First Aid. A reference file needed by the system may not be present on the hard drive; when the utility tries to find this file, it returns an error message. For example, when Disk First Aid tries to verify a hard drive it tells them that "This is not an HFS disk." The message is silly, since your Mac hard drive must be an HFS volume.

This situation can be fixed with the PowerBook 1400 Updater. It's available at <http://www.powerbook.apple.com> or on a floppy by calling 1-800-SOS-APPL.

- ASF Associates Ltd. has a series of small lights for mobile computing, including PowerBooks and PDAs, such as the Newton MessagePad and Pilot. The battery-powered devices lets one see non-backlit displays, or the keypad, if touch-typing skills are less than perfect.

The \$29.95 Palmtop Computer Light 300 using four AA batteries has an extendible arm that holds the light bulb. It comes with four spare bulbs, a 12-volt DC adapter for cars and a traveling case; a version without the car adapter costs \$24.95.

In addition, the company offers the mini-PCL, a \$19.95 smaller model that uses only a pair of AA batteries.

The \$49.95 Notebook Computer Light 480 clamps on the top of the display. It comes with an AC adapter, rechargeable batteries, and a pair of spare bulbs. The NCL 400, a version with the auto adapter instead of the AC power plug costs \$39.95.

Shareware Spotlight

In the world of computing we often take several steps forward and more than a couple back. This is surely evidenced by Email Effects, Gideon Greenspan's new Shareware program.

The \$10 drawing software takes a graphic image and converts it into standard ASCII characters that can then be pasted into an email message. Email Effects provides basic drawing tools for text, lines, circles and boxes, as well as for rotating and

selecting elements. Users can also drag into the program an already existing image.

In addition, the application supports direct pasting into Claris eMailer and Qualcomm Eudora.

Of course, high resolution images created in graphics programs can be added to most email messages via enclosures. But then you have to worry about mail gateways, file conversion and other mundane matters.

The Email Effects method has a gritty low-tech feel that's a lot of fun. It really spices up an ordinary message.

I remember years ago at a state fair having my smiling visage captured with a video camera, and then processed and printed. It was a cheap memento and nothing like the color graphics that today's vendors can plaster on t-shirts or coffee mugs. Now I can relive the nostalgia with Email Effects.

ASF Associates Ltd.

Merrick, NY
Phone: (800) 771-3600
or (516) 868) 3918
Fax: (800) 625-6897
or (516) 868-6897
asf1@ix.netcom.com
<http://www.std.com/asf1>.

May

There's an old adage about the stress of living in "interesting times." The past several months have given plenty of evidence for its truth: Apple restructuring, and rumors of buyouts and hostile takeovers.

The shame of all the hullabaloo is that it drew most everyone's attention away from a bunch of great news about the platform: Apple's release of some really fine products and a new PC emulator.

But why should this time be any different after the company's run of bad luck over the past year? Perhaps, however, there's a byte of good news among the uncertainties. Onward!

One Degree of Separation

Like the popular bar game that tries to find the degrees of separation between Kevin Bacon and any movie star on the planet, Apple watchers have been making similar matchups between Steve Jobs and several well-known multibillionaires.

The first bigwig on the scene was Oracle Corp. CEO Larry Ellison. According to newspaper reports, he and a cadre of anonymous investors would work out a deal for cash and stock with Apple shareholders. On the top of Ellison's to-do list was the axing of Amelio and current upper management; he also suggested that Apple would do better with a new Board of Directors headed by Ellison and his good buddy, Steve Jobs.

On the top of Ellison's to-do list was the axing of Amelio and current upper management...

Some Wall Street gurus estimated the initial cost of the purchase at \$1.25 billion, but Apple's share price immediately rose by \$1.87 on the news. It bumped the takeover cost by \$234 million—the day the story appeared. What a surprise? NOT.

The very odd thing about this hostile takeover is that it is being carried out in public—or perhaps not so odd for a guy with \$6 billion standing behind his gold card. Cash and ego seem to go together. In addition to quizzing some of the large institutional stockholders, Ellison and Oracle created an email drop for the public to give feedback on the move.

The email address—savapple@us.oracle.com—perhaps betrays a poor Mac omen. It is missing the "e" because of the eight-character limit of Oracle's servers.

On the top of Ellison's to-do list was the axing of Amelio and current upper management...

This is not the first time that Ellison has checked out Apple's readiness for plucking. According to documents uncovered in an Oracle executive lawsuit, the company's top brass gave the green light to a buyout a few years ago.

Nothing happened then and it appears that a similar lack of movement will happen this time. A week after the Apple play, Ellison was off looking for other fish to deep fry.

Then shortly after the Ellison incident, it was revealed that Alwaleed Bin Talal Bin Abdulaziz Al Saud, a Saudi prince, had been purchasing big lots of Apple stock. It turned out that he had bought more than 5 percent of the company, making him the largest individual shareholder!

But here's the silver lining of the gloomy cloud. The prince is known to be a whiz at finding companies that can be pulled out of the dumps, according to a Wall Street analyst I spoke with. Alwaleed Bin Talal has bought these stocks low and then sold them high, after the companies recover. Depending on the state of the stock market, the price is worth about \$10 billion; perhaps this is strong evidence of his past success at picking winners.

"Apple is down but not out," Alwaleed Bin Talal reportedly said in a Bloomberg report. "We could have the old Apple back." And he reportedly said he's a "good friend" of Oracle's CEO.

Holy cow. Two degrees of separation from Steve Jobs!

A Performa by Any Other Name

A while ago Apple decided to ditch the Performa name for its entry-level machines aimed at home and small-business users. Thank goodness.

First, the Power Macintosh moniker is plenty good; but second, many users thought their Performas weren't "real" Macs. Of course, they were and still are. But the confusion has often sparked a confusing litany of questions at BMUG meetings about Performas when discussing various tips and software updates.

In the good ol' days, there were grand discussions on how the Macintosh Quadra 605 is identical to the LC 475, which is identical to the Performa 475. And so on...

So Apple's latest systems for SOHO (small office, home office) customers have the Power Mac label. But what really counts is that the new models have a lot of power under the hood.

The new Power Mac 6500 comes with the low-power PowerPC 603e processor; in April one can buy models with 225-, 250-

One of the recent great announcements overshadowed by Apple's fiscal (and personality) problems was the forthcoming PC emulator from Connectix Corp.

MHz flavors and in May Apple will ship units with chips running at 275 and 300 MHz. The systems (without a monitor or keyboard) will cost between \$1,999 and \$2,999.

In addition to raw processor speed, the new models are also a lot faster when handling multimedia. They come with built-in hardware acceleration for 2-D and 3-D graphics, as well as support for millions of colors on 17-inch monitors. To get these features before, users needed one or more add-on boards.

The systems also come with at least 32 megs of RAM, a 3- or 4-gig disk drive, a 12x CD-ROM, and an internal 33.6-Kbps GeoPort modem.

Apple will sell them with one of three software packages: one for home users and another for small businesses. There's also a bundle for print and a multimedia creation bundle that includes the Avid Studio video-capture card as well as a TV and radio tuners.

The high-end \$2,999 Performa 6500/300 will come with 64 megs of RAM, a 512-Kbyte Level 2 cache, a 4-gig hard disk and an Iomega Zip drive. It will come with the home software bundle.

In addition, Apple introduced two new models with PC-compatible PCI cards: the Power Macintosh 7300/180 and 4400/200, which use a 180-MHz PowerPC 604e and 200-MHz PowerPC 603e processors, respectively. The 7300/180 includes a 166-

MHz Intel Pentium card, while the other uses a Cyrix PR166 6x86 processor. People can also buy the Pentium card separately for \$999.

Emulation Proclamation

One of the recent great announcements overshadowed by Apple's fiscal (and personality) problems was the forthcoming PC emulator from Connectix Corp. (<http://www.connectix.com/>). According to the company, its Virtual PC emulator will let PowerPC-based Macs run most PC applications, including popular 3-D games. The software is due in June.

One of the recent great announcements overshadowed by Apple's fiscal problems was the forthcoming PC emulator from Connectix Corp.

Connectix said the emulator can run off-the-shelf versions of all PC operating systems, including Microsoft Corp.'s Windows 3.1, 95 and NT; IBM Corp.'s OS/2; and even Apple's (formerly NeXT's) OpenStep. This is how most users would expect an emulator to work; you load in whatever you might have hanging around, unlike the currently available SoftWindows from Insignia Solutions.

While the company didn't offer any specific performance measurements—or price information—it said the emulator will provide "playable performance," meaning that the application can handle the heavy-duty audio and video needed for PC games. Connectix said Virtual PC will also play the full-stereo SoundBlaster audio that the shoot-em-up crowd craves.

The ability to run these games will really lend confidence to new purchasers of Macs, especially for home use. I know a lot of parents that are giving more than a casual look at the PC side of the fence because of games! Kids can have a major say in the decision of which flavor of computer to buy. With Virtual PC, parents can be sure that the youngsters can hold their own in schoolyard discussions of the latest and greatest computer games.

Some upstanding Mac citizens have been trumpeting that Virtual PC will beat a currently shipping Pentium-based Wintel PC. This is just wishful thinking. Software emulation will not beat Intel at its own game, even with the screaming-fast chips coming out of the PowerPC camp right now and in the summer.

If you want the best speed on a Mac, your best bet is to find regular PowerPC-native programs—there are plenty of choices.

Shareware Spotlight

If you have small kids around the house and the Mac, take a look at TykeWriter, a word processor for children starting to learn their A-B-Cs.

Instead of typing in the complicated, grownup application, the software presents several types of keyboards on the monitor. The author said kids—unfamiliar with both the keyboard and alphabet—can be distracted by having to look down at the keyboard to find each character's hiding spot.

The \$10 Shareware, by David Lazarus of Elkins Park, PA, also has several levels that parents can choose for their kids. As the tykes become more accustomed to the alphabet and typing, they can move up to more features, such as Cut and Paste.

Anyone with kids (or even a novice user) knows the horror of discovering data files overwritten or deleted by the little darlings. Since TykeWriter uses a proprietary format, kids can't mess with your important documents.

June

Added to the usual selection of Mac tips and information, this month's column will include a report on the happenings at April's BMUG MacFest, our annual event in Berkeley. Onward!

A Mac Feast at the Fest

Given all the negative press surrounding Apple over the past year, one might believe that this year's MacFest would be filled with a small band of somber campers. Instead it became a renewal for Mac-philies, a true love-fest.

A happy throng of about 7,000 made their way to the University of California campus for a good time with the Macintosh. There were several new product demonstrations and seminars.

"The Mac certainly doesn't look dead here," Lorca Hanns, Webmaster for the Franciscan Shops in San Francisco, and BMUG volunteer. He said the tremendous attendance evinced the famed loyalty of Mac users, especially BMUGers. "All these people turned up with minimal advertising [for the Fest], on a Saturday, and on the

Berkeley campus, where it's hard to find parking," Hanns said.

"Nowadays, people don't find graphical user interfaces unusual—Apple has completely succeeded in setting the general computing expectation of the public," said longtime BMUGer Bill Woodcock, network architect with Zocalo Engineering in Berkeley. "It's refreshing to come to MacFest where people don't take [GUI computing] for granted."

However, Woodcock said some Mac users and developers are a bit jaded about the Macintosh. He was recently "blown away by the Mac's video conferencing with CoolTalk. It really works great, even with a

"Where I work it's a PC
shop and I have to justify
any Mac purchase," Dang
said. "The powers that be
are scared by all the bad
press about Apple But I
keep pointing out how
the Mac is easy and
Windows is not"

camera that costs under \$200," he said.

"I still have the capacity to be surprised by the Mac," Woodcock said. "You sometimes need to come back [to the Mac] and take a look with fresh eyes. The Mac can still have the great shock of ten years ago."

Apple's continuing financial woes were on people's minds.

"Deep down inside I may have some worries [about Apple], but here at BMUG I get great positive feedback," said Robert Lettieri, co-author of the Little QuickTime

Page (www.BMUG.org/Services/qt/). As a cross-platform Web designer, he was gaining greater acquaintance with the Wintel side.

"I have to use Windows 95, and it really sucks." But Robert admitted to a bit of confusion, or ambiguity, since he found exploring a new operating system "exciting"—even one that he didn't really enjoy.

"There are sure a lot of people here for a 'little' show," said Herb Dang, chief operating engineer with the San Francisco Public Utilities Commission. "The security guard is looking to close us down for over capacity in the hall," he said.

"Where I work, I have to justify any Mac purchase. The powers that be are scared by all the bad press about Apple. But I keep pointing out how the Mac is easy and Windows is not." — Herb Dang

Many attendees brought their kids to MacFest. Some were BMUG babies in tie-dye; others were more startling—teenage children of longtime volunteers, now volunteering on their own! It's an odd feeling to say (like our parents before us), "I remember these kids when they were knee-high to the original Mac 128K."

"This is the reason I got into computers: fun," said Jim Fisher, a lawyer based in San Francisco. He had brought Sasha, his five year-old daughter—Sasha was quick to point out that she is five and three quarter years old). "It's a great father-daughter afternoon."

MacFest Bigwigs

The event featured speeches by Ellen Hancock, Apple executive vice president of advanced technology, and Jean-Louis Gassée, CEO of Be Inc., the Menlo Park, California-based startup company with a forthcoming multimedia operating system that runs on recent PowerPC-based Macs.

Hancock gave the stock spiel about Apple's dual operating system strategy: the Mac OS and Rhapsody, the next-generation systemware based on the OpenStep software, which was part of the purchase of NeXT Software Inc., last December.

In Rhapsody, Mac OS applications will run in a so-called Blue Box compatibility layer, while new "native" programs will run in a Yellow Box. Initially, the Yellow and Blue Boxes will need a lot of RAM to run, so it will be aimed at high-end users.

However, Hancock said to help education and mobile users, Apple will code the Yellow Box to run under 16 megs of RAM. She expects that the Mac OS will be used for at least another couple of years. "It will take us a long time to get 20 million Mac users over to Rhapsody," Hancock said.

I'd hazard a guess even with OpenStep's efficient memory handling, applications will want RAM above the minimum. Of course, even with today's Mac operating system (Version 7.6.1), more RAM is better; 32 megs is a good place to start and 64 megs is very comfortable.

When asked about the user interface of Rhapsody, Hancock said there was a "raging

ucts for Mac and Windows.

"If I'm a software developer with Mac and Windows products, I'm too busy [for Be]," Gassée said. "It's up to us to prove ourselves. Our developers will be people without an established business."

"BeOS is the ultimate demo operating system," said Bruce Linde, Web developer of Really Desperate Records and longtime member of the BMUG peanut gallery.

In a comic scene, Hancock high-fived Gassée on her way out of the hall after her talk. However, she did ask some of us to ask him some really hard questions.

At the end of MacFest, Tim Holmes, BMUGer and Apple systemware evangelist,

Bytes and Pieces

- Most users feel that the latest version of the operating system must be the best for their Mac. However, that may not always be the case.

Nowadays, there's a separate schedule between the systemware teams and the groups that qualify Mac hardware. So there can be a lag time between the time that a new model is released and then supported by the operating system. There are quarterly updates to bring things in sync.

For example, the Power Mac 4400, 6500, 8600, 9600 models are not supported by plain Mac OS 7.6. They shipped with System 7.5.5 and an enabler extension.

...be very careful when installing the latest and greatest" or you could do more harm than god.

debate" inside Apple over what elements from the Mac OS will be used in the forthcoming operating system. She said the company may be cautious than "getting clever with change for change's sake."

"I was impressed with Hancock's ability to answer everybody's questions, even from everyday users," said Gary Goodenough, consultant based in San Francisco and a mainstay at BMUG West meetings. "She didn't talk down to anybody. I'm much more optimistic about Apple after hearing her."

In a separate demonstration, Gassée showed the capabilities of BeOS. Still in beta, the software will run on most PCI Macs; it has been licensed by several cloners.

Be is targeting its operating system at multimedia applications and Web servers. "The enterprise space is not for us," he said.

Gassée said it will be offered on the Net to users, as well as given away on a CD-ROM by the end of the year.

Gassée was trying to drum up support from BMUG developers. He said BeOS will appeal to independent "disenfranchised" programmers, without established prod-

demonstrated Mac OS 8, code-named Tempo. Slated for release this summer, this version includes many elements from Copland, the former next-generation operating system.

Some of the elements were major, such as Setup Assistants that interview users to set controls, and a new Help menu. Tim said that testing discovered that users didn't really see the question-marked icon on the menu bar. Other features were just fun, such as the new HTML color picker that looks like crayons.

"The big thing is the new Finder: it's amazing," said Fernando Lozano, systems consultant with Deloitte & Touche Consulting Group LLP office in Walnut Creek. "I've been spoiled by Unix [for powerful features], but the Mac user interface is truly elegant," he said.

"In System 8, Joe average user will see performance increases, a multithreaded Finder, and a cooler interface for doing everyday things," Lozano said. "There's no doubt that day in and day out, the Mac is easier [to use] than any Windows box."

And from the look at Tempo, the Mac will be even more easy to use.

However, they all work fine with the 7.6.1 update, released in April.

So be very careful when installing the "latest and greatest," or you could do more harm than good. If you had put Mac OS 7.6 (the shrinkwrap CD-ROM version) on one of the machines above, then it wouldn't work. Ouch! And if you didn't have the previous system to reinstall ... very not good.

- Many people are interested in Apple's eMate 300, the green, portable clamshell machine, based on the Newton operating system. Until recently, the sturdy, unit was offered only to schools, but the company now lets individual students and faculty buy them. Higher education users should call the Campus Direct Individual Purchase Program at (800) 877-4433 and K-12 educators are served through the Apple Educator Advantage Home Computer Purchase Program at (800) 959-2775.

- Kensington Microware Ltd. recently released SmartSocket Adapter, a new line of surge protectors that are very easy to use. The best feature of the devices is the spacing of the sockets—far enough apart to hold six power adapters. Most surge protectors are designed for regular three-prong power

plugs—an adapter or two can cut out half the slots.

In addition, each socket has a colored plastic ring around it. Users can put similarly colored tags on the cord so that one can quickly know which plug goes with what cord. No more following the cord back to the power strip, through the usual tangle behind the machine.

There are three models, each with a different joule rating. The basic, standard and premium versions cost \$29.99, \$39.99 and \$49.99, respectively.

Shareware Spotlight

Tiger Technologies of Oakland, Calif. recently released Window Monkey, a new Shareware utility. The \$20 control panel lets you put colors, patterns or an image in the background of a Finder window.

This is very useful feature if you frequently keep several windows open on the desktop, such as folders of aliases or documents. Or you can assign a pattern or color to the windows of an external hard drive or Zip disk. It's then easy to spot them in the often blizzard of other application or Finder windows.

In addition, Window Monkey throws an icon on the Menu Bar that lets you switch between currently running applications, other programs that you can set, and recently visited folders. When a file is saved or opened, the utility puts in an icon that also lists folders. 

Tiger is at www.tigertech.com.

David Morgenstern is a longtime BMUGer. He can often be found with Lorca Hanns, Ron Hipshman, and David Schwartz at the monthly BMUG West meeting at the Exploratorium science museum in San Francisco.

It's held on the last Monday of the month. You can reach him at david_morgenstern@macweek.com

Copyright © 1997 David Morgenstern.
All rights reserved.

A Rhapsodic Adventure

1997 Apple Worldwide Developers Conference (WWDC)

NUMUG Trip Report

John Norstad

Dual OS Strategy and Delivery Schedules
My Perspective on Apple's Problems
Rhapsody Architecture Overview
Blue Box
Yellow Box
Blue/Yellow Integration
Advanced Mac Look and Feel
Java
Core OS
UNIX
Apple's Cross-Platform Strategy
The Five Rhapsody Products
Write Once, Deploy Everywhere
Comparison to the Cross-Platform Alternatives
Conclusion

Last week, I attended Apple's annual Worldwide Developers Conference (WWDC) in San Jose, California. This is a report on my trip.

I concentrated exclusively on the Rhapsody track. Rhapsody is Apple's next-generation operating system combining Apple and NeXT technologies.

I skipped the other four tracks on Mac OS, Interactive Media, Internet and Web Technologies, and Hardware. So this talk is almost entirely about Rhapsody.

I'll begin with some introductory remarks about Apple's dual OS strategy and delivery schedules and my perspective on Apple's problems. Then I'll give a fairly detailed overview of Rhapsody's architec-

ture. Then I'll briefly discuss Apple's cross-platform plan, which I think is quite important and interesting. I'll finish with some concluding remarks and invite questions and answers.

Please keep in mind some important terminology I'll use throughout this presentation. When I say "Mac OS", I mean the classic Mac OS that we use today and will continue to use for the foreseeable future - System 7 and its soon-to-be-released successor System 8, code-named "Tempo," and future versions (Allegro, Sonata, etc.). When I say "Rhapsody," I mean Apple's future completely different operating system.

Dual OS Strategy and Delivery

Apple is committed to parallel development of Mac OS and Rhapsody for the foreseeable future. This strategy permits customers to migrate to Rhapsody at their own speed.

The Mac OS is alive and well. By the end of the ill-fated Copland era, there were only six engineers on the Mac OS team. There are now over one hundred! Apple plans an aggressive schedule of major Mac OS enhancements and new releases. Mac OS will continue to improve in stability, performance, and features. It should survive and prosper for another 5-10 years. Apple has concrete plans and schedules for at least the next four major Mac OS releases:

Tempo = System 8.0. Summer '97

Allegro. Summer 1998.

Sonata. Summer 1999.

Unnamed. Summer 2000.

Rhapsody represents the future, however, and that's what I'd like to talk about

tonight. The schedule for Rhapsody is:

Developer Release 1. Summer 97. This release will be for developers only, not users. It will basically be a straight port of NeXT's current OpenStep system on Mach to the PowerPC, with only a few additional features. It will only run on 8500 and 8600 models, although after a significant amount of developer feedback (a polite term for "bitching"), Apple said they will try to also have support for 9500 and 9600 models. (On May 30 Apple sent a letter to developers announcing that DR1 will indeed support the 9500 and 9600.) In any case, there will be additional developer releases throughout the Fall and Winter with support for additional Mac models, as Apple gets them working. It will only support the UFS file system from BSD 4.4. It will not include the blue box.

Premiere Release. Early 98. This release will be for developers and pioneer users. This release will include final APIs, cross-platform multimedia (QTML), OS servers, support for blue box productivity applications, support for as many as possible PowerPC models, support for PowerBooks with power management, and a much more polished user interface. It will support the HFS Plus, NFS, and AFP file systems. It will support the following device families: SCSI, block storage, pointing devices, keyboard, display, audio, Ethernet, ADB, and serial. It will have limited support for types and creators. The basic HTML-based help system should be in place. This version will be the first to support SMP.

Unified Release. Mid 98. This will be the first production release for end-users, especially high-end users. It will include drivers for most PowerPC devices with tuned I/O performance and the full blue

box implementation. It will support the full range of file systems. It will add support for USB, firewire, video capture, and other device families. It will have full support for types and creators.

My Perspective on Apple's Problems

We all know that Apple has had a very rough time the last few years. Everyone is concerned. I'd like to briefly give my perspective on these problems, cast in the form of a "good news, bad news, good news" story.

Good news: The old Apple is dead.

Bad news: Apple is dying.

Good news: There are signs of a resurrection.

Good news: The old Apple is dead In his fireside chat, Steve Jobs said that Apple's problem was bad engineering management. While Jobs is well-known for his private reality-distortion field, and I often disagree with him, on this point I think he's correct.

This problem is fixed. Apple is a very different company now. They have all new engineering management. They are very focused on their core business and they have learned how to say "no." The Apple and NeXT engineering teams are merging effectively, although there are still some rough edges and evidence of cognitive dissonance. They have made great progress despite the acquisition and restructuring. The teams only started working together on February 4, but they already have the major foundations of Rhapsody working. We saw many impressive demos at the conference, some of which I'll mention later.

For the first time in several years, I am confident that Apple will deliver on its promises, and it will deliver on-schedule. I noticed a common reaction to the conference by many of the developers who attended. Nearly all of us came to the conference depressed, bitter, and extremely skeptical.

Many people didn't bother to come at all. Attendance was down from previous years. We've all been burned too many times by promises that went unfulfilled. By the end of the conference, many of the developers I talked to felt much better. They found the technology exciting and

were cautiously optimistic about the future. This was not a universal reaction by any means, just a common one. Everyone is still very cautious, and few developers have actually committed to doing any native Rhapsody development. Everyone is taking a wait-and-see attitude while they begin to play with and learn about OpenStep and continue to develop and support their Mac OS products. Apple is no longer in the business of throwing hundreds of millions of dollars at futuristic projects to completely change the way we do computing - projects which inevitably end up being incredibly over-engineered, huge consumers of hardware resources, completely inoperable with the standards used by the rest of the industry, slow, buggy, impossible to program, difficult to use, and late or never delivered at all. As Jobs said in his chat, "we put a gun to their heads and shot them dead." (I'm paraphrasing Jobs here, but he said something close to that - it was equally brutal, anyway.) Say good-bye to PowerTalk, OpenDoc, Copland, and their ilk. Good riddance, I say.

Apple is, however, still in the business of producing best-of-class hardware and operating system software which is significantly better than that offered by their competition, relying heavily on industry standards and proven technology, with innovation where it is reasonable, feasible, and appropriate.

Bad news: Apple is dying

Apple's business problems are serious. They must somehow manage to overcome the downward spiral of bad sales and declining market share leading to negative public perceptions and bad press leading to more bad sales, perceptions and press, etc. Steve Jobs says the press is not to blame for this, and that if Apple can get its engineering act together, the press will take care of itself. I agree.

Apple must return to profitability soon. Amelio predicted a profit in Apple's next fiscal quarter (ending in September). He also mentioned that Apple has \$1.4 billion in cash, so that it can afford to ride out a few more bad quarters, but it's clear that Apple simply cannot continue to lose money. They must start showing a profit, and they must do this soon.

Apple must find a solution to the problem of clone-makers cannibalizing their

profits. Jobs recommended that Apple freely license everything, hardware and software, but adjust its fees to make them more "fair." Jobs also pointed out repeatedly that he doesn't make decisions, and this is not Apple's current policy. I confess to total ignorance of these business matters, but some kind of solution must be found for both Apple and the clone-makers to prosper.

Finally, Apple must do a much better job of delivering its new products to customers. There is demand for Macintoshes, but Apple continues to do a terrible job of producing and delivering them. They must solve their manufacturing and operational problems.

Good news: There are signs of a resurrection

Apple has had some very strong new product introductions this year, including fast new price-competitive desktop models and very impressive and popular new PowerBook models. These new hardware products have received generally favorable reviews in the press.

Apple's advertising has improved, in my opinion, although Jobs disagrees. Some of the press reports on the conference have been quite positive. In particular, there was a nice piece in the San Jose Mercury News, which is generally quite negative about Apple.

Dataquest has predicted an "upgrade windfall" for Apple this Fall. Other industry analysts have also predicted better financial performance in the coming quarters.

Let's all hope for the best!

Rhapsody Architecture Overview

In this section, the heart of my presentation, I'll give a reasonably detailed overview of Rhapsody's architecture. We got lots of new information at the Rhapsody technical sessions which I'd like to share with you.

Please see the first architecture diagram, which shows the major components of Rhapsody and how they fit together. We'll discuss in some detail each of the boxes in the diagram. You might like to open the diagram in a separate window or print a copy of it so that you can refer to it as you read the information below.

Blue Box

The blue box is the classic Mac OS

rehosted on the new Rhapsody core OS. The blue box makes it possible to run the vast majority of existing Mac OS software on Rhapsody. Apple removed the low-level parts of the Mac OS and replaced them with a new “abstraction layer” which completely isolates the blue box from the yellow box, the core OS, and the hardware.

While the core OS engineering team worked on getting the Mach kernel running on PowerPC hardware, the blue team worked simultaneously getting the blue box working on top of the old “NuKernel” microkernel from Copland. When the core team got Mach running, the blue team slid out NuKernel and replaced it with Mach.

There was a blue box compatibility lab at the conference running the NuKernel version. The Mach version was completed shortly before the conference started, and it was used in the demos, but it wasn't quite stable enough for use in the lab. In both the lab and in the demos, the version of Mac OS used was the latest Tempo beta 3 version.

The blue box is very impressive, especially the fact that they've got it working so well in such a short period of time. It provides excellent application and extension compatibility. Over 400 pieces of software were tested at the conference, and only four of them failed! Even Steve Jasik's low-level debugger worked!

I tested my software, and I'm happy to report that the Disinfectant application, the Disinfectant INIT, and the non-networking parts of NewsWatcher all work fine. (We didn't have an Internet connection in the lab, so I wasn't able to test NewsWatcher's networking parts.) It would have been inappropriate for me to conduct live virus tests in the lab, but I'm confident that the current crop of Mac viruses which work on System 7 and 8 will also continue to work just fine and spread quite happily in blue. This is perhaps not such good news, but it does provide more evidence of the high level of compatibility provided in the blue box.

In the demos we saw Photoshop, Marathon, QuickTime, and CodeWarrior all working in the blue box running on Mach.

Blue provides much better compatibility than Copland. For example, almost all extensions work fine in blue. Copland

would have broken all extensions.

Playing with blue in the lab was actually quite boring, since it was almost indistinguishable from a plain Mac running Tempo. That's the whole point, but it was still boring! In terms of compatibility for old Mac OS software, the transition from Mac OS to Rhapsody should be very similar to the very successful transition from 68K to PowerPC several years ago. Most software will “just work.” There will be a few problems and exceptions, but they should be minor.

The only old software which will break under blue are programs which talk directly to hardware without going through the Device Manager, some kinds of extensions which patch File Manager traps and expect to be able to intercept all file system I/O (yellow box file I/O to shared disk volumes will not be intercepted by these kinds of blue box patches), and any other software that modifies or relies on the internals of shared system services. Blue is not an emulator of any kind. It is mostly an exact copy of today's Mac OS, bug-for-bug, feature-for-feature, just rehosted on the new core OS. Most programs should run just as fast as they do on Mac OS, or perhaps only a little bit slower. Some operations will even run faster, due to performance improvements in the core OS.

Blue is very similar to MAE (the “Macintosh Application Environment”), an Apple product which lets you run Mac software on UNIX systems. Blue is a bit simpler than MAE because it does not require a PowerPC emulator.

Blue uses a RAM-based ROM image. There's no hardware ROM.

There is no preemptive multitasking or protected memory inside the blue box. A blue application that crashes can still take down the entire blue box, just like an errant application on Mac OS can take down the entire Mac. An errant blue application, however, cannot crash the core OS or yellow box. In Rhapsody, if a blue crash occurs, you can easily and quickly reboot just the blue box, without having to restart the entire computer.

To the Mac OS running inside blue, it appears as if virtual memory is turned off on a Mac with 1 gigabyte of memory! The core OS does virtual memory operations behind the scenes, but this is mostly trans-

parent to the blue box. There are two important benefits of this new scheme:

- No more worries about memory fragmentation!
- You can set memory partition sizes very large with no ill-effects for most applications.

The blue box will also provide improved stability via “guard pages.” These are special virtual memory pages which are marked read-only and are placed at the beginning and end of each program's stack and heap. In the regular Mac OS, programs sometimes “run off the end” of their stack or heap when writing memory, and end up trashing memory belonging to the system or other programs. This often causes bad crashes. In blue, such a misbehaving program will crash, but it won't take down other programs or the whole blue box along with it.

Several people asked about the following obvious idea: How about having multiple blue boxes? This would give some of the benefits of preemptive multitasking and protected memory to Mac OS programs. Apple's answer is that there are problems that would have to be solved. For example, each copy of the blue box expects to have exclusive write access to desktop database files. Also, the memory footprint would be rather outrageous. While it might be possible to do this in the future, it is unlikely that this feature will be included in the Unified release.

In summary, the blue box provides excellent compatibility for Mac OS software, comparable performance to the regular Mac OS, even better performance in some cases, and somewhat better stability.

Yellow Box

The yellow box is a major component of Apple's new operating system. It is based on OpenStep technology from NeXT.

OpenStep is a second generation object-oriented system. It's advanced, mature, and very rich. It has three components:

The Foundation Kit, a collection of object classes which provide basic collection classes, a semiautomatic garbage-collection memory management system, abstracted interfaces for underlying operating system services like threads, and other low-level services for programmers.

The Application Kit, a collection of object classes which programs use to present their user interfaces and which users use to manipulate and control those interfaces. A Display PostScript graphics engine (DPS). True “what you see is what you get.” This is important in the publishing and graphics industries.

As an example of OpenStep’s richness, I’ll compare the Mac OS “styled TextEdit” package to OpenStep’s text object. Styled TextEdit is used on the Mac to display and manipulate wrapped paragraphs of text. It can handle fonts and styles, but is limited to a maximum of 32K of text. In conjunction with WorldScript, it can be coerced into doing non-US English and non-Roman languages. It was originally designed for simple small text entry fields in dialogs, but has been extended by Apple and abused by programmers for more complicated uses for years. It is a nightmarish labyrinth of complexity for programmers, with hacks layered on hacks layered on hacks. NeXT’s text object is much richer and much, much easier to work with. It supports tabs, rulers, kerning, the Unicode character set, and has no restrictions on size.

One of the most impressive demos at the conference involved an extension of the text object (a subclass) which does HTML. This new HTML-aware class will be part of the yellow box version of OpenStep. The object was used to build a fully functional Web browser in Interface Builder in only a few minutes, without having to write a single line of code! The browser had a text field where you could type URLs, forward and backward arrows for navigation, and the usual large scrolling field to display the Web page.

Steve Jobs has a favorite story about OpenStep which he repeated in his fireside chat. I’ll paraphrase it here. Software development is about managing complexity. We build our software in layers that become increasingly complex as layers are added. Experience shows that we can only build about four layers high before the complexity becomes overwhelming and our programs collapse of their own weight. As analyzed in the well-known book “The Mythical Man-Month,” adding more programmers to such a complex project actually hurts more than it helps. The human mind just doesn’t seem capable of building higher than about four layers of complexi-

ty. Jobs likes to compare this to constructing a building. With other systems, enough foundation is provided by the system so that it is like starting your building at the fourth floor. By adding your own four floors (layers of complexity), you can build up to an eight story building. Because OpenStep, the Objective-C programming language, and the NeXT development tools are so rich, with OpenStep you start at the 23rd floor, and can thus build a 27 story skyscraper!

This Jobs story is typically extreme. In particular, it begs the question of how the NeXT engineers managed to build this system foundation with 23 layers of complexity, if the rest of us mortal programmers can only manage four of them! There is, however, a serious element of truth in this story. OpenStep is indeed superior to the competition, and it does significantly improve productivity and the “height” of the software we can produce. Every programmer I’ve met who has used OpenStep has confirmed that they are much more productive using OpenStep than with any other environment. Many of them have used other current popular industry object frameworks like Apple’s MacApp, Metrowerks’ PowerPlant, and Microsoft’s MFC. The unanimous opinion is that OpenStep is much better than any of them. I look forward to finding out for myself!

In addition to its OpenStep foundation, the yellow box includes the following advanced technologies from NeXT:

- Multi-user system with security. Rhapsody can be used as a single-user system much like today’s Mac OS, or you can have multiple UNIX user names and passwords with UNIX file security. Yes, Virginia, you’ll be able to telnet to your Rhapsody box!
- PDO = Portable Distributed Objects. A state-of-the-art system for distributed computing. Objects running in separate processes on separate computers can send each other messages almost as effortlessly as they do when they are in the same program. One of the NeXT engineers who designed and implemented PDO presented at the conference sessions. I’m quite impressed by PDO.
- EOF = Enterprise Object Framework. EOF provides an object interface to all

of the major commercial database products. It’s important in the enterprise market.

- WebObjects. This is a system for rapid development of Web pages, CGI gateways, and Web server plug-ins.

The yellow box will also incorporate several major technologies from Apple:

- The QuickTime media layer (QTML): QuickTime, QuickDraw 3D, and QuickTime VR.
- QuickDraw GX typography.
- ColorSync.
- Scripting. Apple hasn’t decided exactly what the scripting language will look like (AppleScript or otherwise), but it has promised Apple events and a ubiquitous scripting system integrated into the OpenStep classes.
- V-TWIN search engine.

Applications running in the yellow box enjoy the full benefits of all the services provided by the Mach kernel, including preemptive multitasking and protected memory. We’ll talk about this more later when we go into more detail about the core OS.

Blue/Yellow Integration

The user experience in Rhapsody is that of using two almost completely separate computers. The blue and yellow environments are quite clearly separated and only share a few well-defined resources.

There will even be two Finders, one for blue (the Tempo version of the Mac OS Finder), and one for yellow (the new Rhapsody Finder)!

The blue box can run in full-screen mode or inside a yellow window. You cannot mix blue and yellow windows together on top of each other on the same shared screen in the same way you do when you are running with a single operating system. Full-screen mode is the fastest and most compatible. There will be a hot key to switch between blue and yellow in this mode. The yellow box will be invisible in this mode, except for a command in the Process menu to switch from blue to yellow. When you select this command or use the hot key, all the blue windows will disappear (including the blue Finder), and all the yellow windows will appear (including the yellow Finder). The user experience in

this mode is definitely one of switching between two completely separate systems.

By “full-screen” here, I mean all the monitors combined (the “virtual” screen). So in full-screen mode, the blue box takes over all of the monitors. (By the way, both blue and yellow will be able to handle multiple monitors in the same way as today’s Mac OS.)

Drag and drop works within the blue box, and within the yellow box, but not between the two boxes. For example, when using blue inside a yellow window, if you try to drag something out of the blue window and into the yellow part of the screen, the dragged object will be pinned to the edge of the blue window.

This lack of tight integration between blue and yellow is unfortunate. Everyone hated this when they first started to hear about it. It was a hot topic at the conference. There was also a great deal of debate about this within Apple. My impression is that this is the most contentious design issue in the entire Rhapsody project.

There is no ideal solution. Apple made a tough call. The decision to keep the two environments clearly separated was made for human interface reasons, for technical reasons, and for time-to-market reasons.

Kurt Piersol, a long-time Apple human interface guru, tried to explain this decision in some detail in his session on “The Rhapsody User Experience.” I’ll try to reproduce his arguments here. Piersol also said that all of these issues are subject to further examination and modification based on user testing in Apple’s human interface labs. Piersol and other speakers also mentioned that the integration will improve as Rhapsody matures after the Unified release.

The basic problem is that the two environments are quite different, in both obvious and subtle ways. One of the basic principles of human interface design is to avoid hidden modes. If you can’t provide seamless integration of two modes, make the mode switch obvious. Other basic rules to keep in mind are: Don’t change modes unexpectedly, don’t try to hide differences that make a difference, and don’t make the user guess what changed.

Here’s some examples of human interface problems that would arise if Rhapsody tried to hide the distinction between blue

and yellow programs:

- Mac OS extensions can’t affect yellow applications. Many of these extensions affect the visual appearance of menu bars, menus, windows, controls, etc. Users would be confused when the visual changes caused by an extension only affected some of their programs.
- Even worse are Mac OS extensions which not only modify visual appearances, but also modify the behavior of user gestures in the blue box.
- If windows looked different in blue and yellow, and they were all mixed together, users would be confused.
- Yellow doesn’t have window layers, but blue does. When you bring a window to the front in blue, all the other windows belonging to the same program also come to the front. In yellow, only the single window comes to the front. (Piersol did, however, promise that there would be some way, presumably a modifier key, to bring all of a program’s windows to the front in yellow.)
- When a blue application crashes, it can take all the other blue applications with it, but not yellow ones. This would be very confusing if the blue and yellow boxes were not clearly distinguished.
- Imagine the confusion when a user discovers that he can drag between some programs, but not between other ones, unless there is a clear separation between the blue and yellow environments.

Here’s some examples of the technical integration problems:

- There has to be a blue Finder, because many blue applications, extensions, and scripts depend on the Finder to perform various tasks (e.g., sending the Finder Apple events to manipulate the file system). But the yellow box needs a Finder too, and it needs one that can’t be destroyed by a misbehaving blue application. While it might be technically possible to design and implement a unified Finder used by both sides, this would be very difficult, it would take a very long time to develop and hence would delay the release schedule, and it would be much more likely to break existing Mac OS software running in the blue box. For all of these reasons, Apple has decided to have two separate

Finders, at least up through the Unified release. Basically, two Finders is the only way to get both compatibility and stability.

•Similarly, while Apple engineers have some ideas on how to solve the problem of drag and drop between blue and yellow, the ideas are very complicated, would take a long time to implement, and would be much more likely to break existing software.

•The same problems occur with mixing blue and yellow windows in the same shared screen space. While this is perhaps just barely technically feasible, it would be fragile and very complicated.

In summary, there are four main reasons for not attempting to tightly integrate the blue and yellow boxes:

- The human interface problems would lead to user confusion.
- Tighter integration would decrease compatibility for Mac OS software running in the blue box.
- Tighter integration would decrease stability.
- Tighter integration would significantly increase time-to-market. This is a cardinal sin in the new Apple!

After listening to Piersol explain all of these problems, I reluctantly agreed with him that the weak integration of blue and yellow is a necessary evil. After thinking about it, I don’t think it will be all that bad.

While the blue and yellow halves of Rhapsody are mostly separate, they do share some significant resources:

- Shared file systems. We’ll talk a bit more about this later.
- The clipboard. You can copy and paste between blue and yellow.
- Apple events.
- Network connections. E.g., a blue program could communicate with a yellow program using a TCP stream.
- Fonts. Blue and yellow will probably share a common fonts folder, to save on disk space, especially for Japanese users, whose fonts can be very large.
- The Process menu. While in the blue box, there will be a single command in the Process menu to switch to the yellow box, and vice-versa.

- The system clock.

Rhapsody will support dual boot. At startup time, you can choose between running Rhapsody or the classic Mac OS.

Advanced Mac Look and Feel

The human interface of Rhapsody will be based primarily on the Mac human interface, with new ideas incorporated from the NeXT human interface. Contrast this to the internal “guts” of Rhapsody, the yellow box and the core OS, where the situation is the opposite: the foundation is NeXT technology, with additional elements incorporated from Apple technology.

Rhapsody will have the familiar Mac menu bar across the top of the screen. When we saw the first demo with a menu bar at the conference, the audience cheered loudly and let out a collective sigh of relief - Yes, it WILL be a Mac!

Rhapsody will let you drag icons to the desktop, just like the Mac OS. The NeXT dock will become superfluous for this reason and will probably be eliminated.

Rhapsody will use Mac-style windows and controls, using the new appearance of Tempo.

Rhapsody will have aliases.

Kurt Piersol promised full plug-and-play in Rhapsody! Apple has to deliver on this promise.

In Finder list views, the columns can be resized and reordered.

Enhancements borrowed from the NeXT human interface include improved scroll bars with proportional thumbs and rearranged scrolling arrows, live scrolling, live window dragging, and the ability to resize windows from any corner or side.

A NeXT-style “browser” Finder window view will be added to complement the Mac icon and list views. It will include the NeXT multiple panes and “shelf.”

Rhapsody will use Mac-style 32x32 large icons, not the larger NeXT 48x48 icons.

The Finder in Rhapsody will be extensible and replaceable. It will be just another application in the yellow box, not as much an integral part of the system as is the Mac OS.

Finder. It will support plug-ins. The icon, list, and browser views will be standard views other programs can use to dis-

play and permit manipulation of their own collections of hierarchical data.

Rhapsody will retain the Mac OS type and creator experience. However, some file systems can't support this (e.g., NFS). In these cases, file name extensions (.txt, .html, etc.) will be used as a fall-back.

We'll be able to put applications anywhere we wish in a file system, as in the Mac OS. We won't be restricted to special directories as in the current NeXT OS.

Rhapsody's help system will be based on HTML. Help text can contain links to Internet-based help and other sources. The system will have powerful navigation with both linking and searching facilities. Apple also plans some kind of extension for task-based help. This help system will not be the same as the Mac OS balloon help and Apple Guide, but it will be similar and serve the same purpose.

Rhapsody will have Internet integration. It will support desktop URLs and Internet data types as first-class citizens. The text object will be extended to handle HTML (as I mentioned earlier).

Rhapsody will have a new installer system which will include built-in uninstall and upgrader features.

Rhapsody can be set up as a multi-user system. In this case, each user will have his own desktop, preferences, etc., similar to Windows NT.

I have one huge concern about this “advanced Mac look and feel” sitting on top of the NeXT-based system foundation. Can Apple hide the UNIX? They must do a better job than X-Windows, Be, or even NeXT. There's something called the “Mom test” in the Apple world (like the Turing test in AI). The basic question is: “Could my Mom use this computer?”

Could she set it up out of the box, install software, learn it and use it, troubleshoot problems, and keep it running all by herself? This is the acid test Apple must pass with Rhapsody. For example, Rhapsody's multi-user features are based on UNIX. How is Apple going to deal with the complexities of the goofy UNIX file permissions? I don't know how your Mom would deal with this, but I know mine wouldn't stand a chance. I see this as the single biggest challenge in making Rhapsody a success. I'm a bit comforted to know that the right people are working on

this problem (like Kurt Piersol). If anyone can pull this off, Apple can.

Java

Rhapsody will have superb support for Java. Apple has decided that Java is a very important part of their future and has devoted significant resources to integrating it into Rhapsody. In his keynote speech, Avie Tevanian said that “Java is Apple's biggest opportunity.” I found the Java information to be some of the most interesting and pleasantly surprising news to come out of the conference.

Rhapsody will support Sun's “100% Pure Java.” This includes compilers, byte-code interpreters (including JITs), the abstract windowing toolkit (AWT) and all three of the new “foundation classes” under development in the industry: Sun's JFC (Java Foundation Classes), Netscape's IFC (Internet Foundation Classes), and Microsoft's AFC (Application

Foundation Classes). There will even be support for the new “Kentucky Foundation Classes” (KFC). (That last one's a joke - feel free to moan.) One of the most interesting presentations at the conference was titled “The Uncommon Object Model - The Rhapsody Runtime.” It turns out that the Java runtime environment and the NeXT Objective-C runtime environment in Rhapsody share many attributes. They both use dynamic method dispatch, single inheritance of implementation, multiple inheritance of abstraction, introspection, exceptions, and garbage collection. Both systems include mature frameworks with collection classes, Unicode strings, OS abstractions, a distribution model, and a persistence model. This similarity is not entirely a coincidence, since Java has parts of its roots in NeXT Objective-C technology, and both share a common inheritance of concepts from the SmallTalk world.

Because of these similarities, and because of the perceived strategic importance of Java, Apple decided to tightly integrate the existing NeXT Objective-C runtime model and the Java runtime model. The match between the models isn't perfect, but it works very well. A Java/Objective-C runtime “bridge” handles messaging across the boundary between the two environments. The bridge maps Java packages into Objective-C frameworks. The bridge also maps classes, scalars, exceptions, and objects. Java has “true”

garbage collection, while Objective-C uses a semiautomatic garbage collection system involving reference counters and “auto-release pools.” The bridge takes care of the details of making these two systems interoperate properly.

This runtime bridge permits programmers to mix and match Java code and Objective-C code freely. You can even subclass an Objective-C class in Java! (Apple is working on the other direction too.)

The entire OpenStep API will be exposed to Java. Java programs can take full advantage of the services of OpenStep. If they do, they won’t be “100% pure” anymore, but there are many advantages to using the rich services of OpenStep instead of the AWT and various xFCs.

The NeXT “Project Builder” and “Interface Builder” development tools will support Java. Java Beans will be first-class components in this environment. For example, you can place a Java Bean component on your Interface Builder palette, then use it in your Objective-C and Java applications as if it were a regular Objective-C palette object.

We saw a demo of a Java application built with Interface Builder and Project Builder which used OpenStep’s Application Kit and Foundation Kit. This stuff actually works!

Apple is working closely with Sun on Java development. They promise simultaneous releases with Sun of new Java versions in Rhapsody. It’s much easier to do this in Rhapsody than it is in Mac OS, because Sun’s Java releases are based on UNIX, and Rhapsody includes a standard UNIX environment to make porting such code relatively painless.

For example, it took Apple less than two weeks to port JavaSoft’s recent version 1.1 Java virtual machine to Rhapsody.

Core OS

The core OS includes the Mach kernel, I/O services, file systems, and networking protocol stacks.

Mach

Rhapsody uses the Mach 2.5 kernel with enhancements. This is often referred to as a “microkernel,” but that’s technically incorrect. Mach 3.0 is a “true microkernel,” but Mach 2.5 is actually a “monolithic kernel.” I try to just call it a “kernel.”

Mach is a modern, small (30K lines of code), proven kernel that is used in several modern commercial operating systems.

Avie Tevanian, the senior vice president of system software at Apple, was one of the designers of Mach at Carnegie Mellon in the 1980’s.

Mach 2.5 provides the usual full set of kernel services:

- Preemptive multitasking.
- Memory protection.
- Threads.
- Interprocess communication.
- Sparse virtual memory.

The enhancements to Mach 2.5 for Rhapsody include symmetric multiprocessing and power management (for PowerBooks).

The blue box runs as a single preemptively scheduled Mach process within a single shared memory address space. Within the blue box, the traditional Mac OS Process Manager does the usual cooperative multitasking between blue applications.

I/O Services

The core OS device drivers run in the kernel’s address space and provide I/O services to both the blue and yellow boxes. They support true plug-and-play, have integrated power management, can be loaded and unloaded dynamically, and are modular and extensible. They are programmed using object-oriented techniques in Objective-C or C++ using the I/O Kit. Writing drivers is fairly easy. For example, Martin Minow of Apple reported that it only took him about three weeks to port the Copland SCSI driver to Rhapsody. He says that “it’s easier than you think to write drivers.”

File Systems

Apple is working on an enhancement to the current Mac OS “HFS” file system named “HFS Plus.” This new file system will be released as part of Mac OS in a maintenance update later this year (after Tempo), and it will also be part of Rhapsody. HFS Plus fixes the small allocation block size problem, so small files will no longer waste such large amounts of space as in HFS. HFS Plus also removes the limits on the number of files per volume and the sizes of files. It also uses 255 character Unicode file names. HFS Plus will be

the default disk format for both blue and yellow.

In addition to HFS and HFS Plus, Apple will also support at least the following file systems in Rhapsody: UDF (the format used by the new DVD disks), UFS (UNIX file system), NFS (network file system), AFP (AppleShare), FAT and VFAT/FAT32 (Wintel file systems), and ISO/9660 (for CD-ROM disks).

File systems are implemented in Rhapsody using an abstraction named “virtual file system layer” (VFS), a standard part of BSD 4.4 UNIX. VFS includes the notion of “stacked” file systems, which can be used to implement compression, encryption, and virus checking software. This mechanism replaces the old Mac OS technique of patching file system traps.

For servers, Rhapsody will also support spanning, striping, and mirroring for disk management, performance and reliability.

File names will be case-insensitive.

In the blue box, there are three ways file systems can be mounted:

A blue box-only volume. This is very compatible with old Mac OS software, even software which patches file system traps.

A yellow box disk image file mounted as a blue box-only volume. This is for convenience (you don’t have to partition your disks) and for compatibility.

Blue and yellow shared volumes.

Yellow files do not have resource forks, but blue files do. To solve this problem on shared volumes, Apple has decided to use the AppleDouble format. The resource fork and Finder metadata (type/creator, icon position, etc.) are stored in a separate file with a tilde in front of the file name. These extra files are invisible in the yellow box, and are automatically copied and moved along with their partners.

Some Mac users have expressed concern about the lack of resources in OpenStep. Don’t worry. OpenStep has something even better called “nib files.” These files are built with Interface Builder, the NeXT tool which corresponds to ResEdit in the Mac OS. Nib files contain archived user interface objects, target/action connections, and other object relationships. OpenStep’s “NSBundle” class implements the notion of a “group of application objects” and offers facilities

akin to the Resource Manager in Mac OS.

Nib files, application binary files, and other files used by a program (e.g., picture files) are gathered together in an “application wrapper,” a directory that appears to the user as if it were a single file. This is quite different from how application packaging is done in the Mac OS, but it accomplishes the same goal, and it’s considerably more flexible and easy to work with.

Networking

Rhapsody will support at least the TCP/IP and AppleTalk protocols in both the blue and yellow boxes. The blue box will use Open Transport for both TCP/IP and AppleTalk. The yellow box will use BSD 4.4 sockets for TCP/IP and a port of the AIX Workgroup Server AppleTalk stack for AppleTalk.

Rhapsody may support Novell and Windows NT networking, but the plans are not firm and we don’t have any promises.

Rhapsody will support 10 and 100 megabit per second Ethernet and PPP. FDDI will be supported soon. LocalTalk support is planned, but no date has been set for support yet.

There’s no token ring or ATM support yet, and the plans for these media are not yet firm.

The blue and yellow protocol stacks are completely separate and operate in parallel. They meet at the device driver layer. The device driver is responsible for demultiplexing incoming packets and sending them to either the blue stack or the yellow stack based on the port number in the packet.

The blue and yellow boxes share a common IP address, although at one presentation there was an indication that there may be an option to use two separate IP addresses. This isn’t clear. Yellow can have additional IP addresses.

The blue and yellow boxes have separate AppleTalk node numbers. It’s not clear that this is workable in many environments, however, and Apple may have to rethink this decision.

TCP/IP in the yellow box supports IP routing, multicast, multihoming, IP aliasing, and raw sockets. Yellow AppleTalk is high performance, multiprocessing efficient, and supports RTMP and AURP.

Networking services include bind and

NFS. Net info is used for network management (a NeXT system which is similar to NIS).

Kurt Piersol said that the yellow box will not use the Chooser, but he did not say what will replace it.

In a feedback session, Apple promised that we will be able to change network configurations without rebooting, using a friendly “Macish” user interface.

Networking is clearly one area where Apple needs to do more planning and work. There has been quite a bit of controversy over the decision to drop Open Transport in favor of the existing BSD 4.4 sockets implementation of TCP/IP in the yellow box, but at least as of the WWDC it looks like Apple’s engineering management is sticking to its guns and going with sockets. This was a very frequently asked question at the conference, and the subject of much debate. Amelio recently stated in an interview that the decision to drop Open Transport was being reconsidered based on feedback from customers and developers, but there was no evidence of this at the conference.

I’m an agnostic in the great streams (OT) vs. sockets holy war. I’m much more concerned about having stable and fast networking in Rhapsody with support for all of the major protocols, network file systems, and network printing systems. As a programmer, I’m very concerned about the proliferation of networking APIs, especially for cross-platform development. OpenStep definitely needs a network abstraction layer so that developers can code to a single networking API for all platforms. We need this for TCP/IP at the very least. XTI or a similar API for transport independence would be desirable but not essential.

UNIX

Rhapsody will include a full BSD 4.4 UNIX distribution. This includes the usual BSD command line shells, utilities, POSIX libraries, programming tools, and other UNIX amenities. They will even ship the Apache Web server! It is not clear whether the full BSD package will be required or optional.

All of the major UNIX utilities, servers, and applications have already been ported to BSD UNIX and will run without change in Rhapsody. One serious concern is the

well-known security holes in these programs, especially in servers like sendmail.

It will be easy to port other UNIX programs to Rhapsody.

Note that BSD UNIX is not depicted in a box in the Apple Rhapsody architecture diagram! This was most likely a wise marketing decision (we don’t want to scare the users, you know!).

Apple’s Cross-Platform Strategy

Apple has a cross-platform strategy as part of the Rhapsody product plans. While some of this information was available before the conference, much of it was new, and this was the first time we saw a complete view of the cross-platform picture. I think it’s quite interesting.

The Five Rhapsody Products

So far we have discussed just one of the Rhapsody products - Rhapsody for Power Macintosh and PowerPC Platform hardware. This is the “next-generation Macintosh”, if you will. Now it is time to discuss the other four products which make up the cross-platform plan.

Rhapsody. This is the Rhapsody on PowerPC hardware product we discussed above.

Rhapsody for Intel Processors. Apple will also release a version of Rhapsody for Intel hardware. This will be a complete OS replacement for Windows 95/NT, OS/2, and other Intel-based operating systems. It is the same as Rhapsody on PowerPC except that there’s no blue box (so you can’t run old Mac OS programs), and the hardware is Intel-based. This product uses the same Mach kernel and core OS as the PowerPC product, and it has the same “advanced Mac look and feel.”

Yellow Box for Windows. This is really two products, for Windows 95 and for Windows NT (there won’t be a version for Windows 3.1). This product is a set of dynamic linked libraries (DLLs) which implement the OpenStep APIs on top of the Win32 API. These libraries run on top of the regular Windows 95 or NT OS, not on Mach. OpenStep applications deployed using the libraries present the regular Windows look and feel, not the advanced Mac look and feel. In fact, the user can’t tell the difference between an

OpenStep application and a regular Windows application. One of the very pleasant new pieces of information announced at the conference is that there will be no licensing fees for this product. Developers can freely ship the DLLs with their cross-platform OpenStep products. This made the developers very happy indeed.

Yellow Box for Mac OS. This product is similar to the Yellow Box for Windows product, but it's for the classic Mac OS. It's a set of shared libraries implementing the OpenStep APIs on top of the Mac OS APIs. These libraries run on top of the classic Mac OS, not on Mach. Users get the regular Mac OS look and feel. This product may be useful for deploying OpenStep applications on older NUBus PowerMacs. (Apple didn't mention 68K Macs, or I missed it if they did. I'd be surprised to see 68K support, however.) Threads will be a problem in this product, since the classic Mac OS (unlike Rhapsody and Windows 95/NT) has no built-in support in the OS for preemptive threads. It may be possible to hack together a solution to this problem (e.g., using critical section wrappers around non-thread safe toolbox calls), but it would be difficult, and Apple's official line is that it most likely won't happen for the Unified release. I think this is an important issue, since the lack of threads dilutes the cross-platform story.

Write Once, Deploy Everywhere

With this cross-platform strategy, software developers who use OpenStep and don't use any platform-specific features can write their programs once and deploy them everywhere, on 100% of the modern PC market! (We're defining "modern" here to exclude Windows 3.1 PCs and 68K Macs). This target market for these "pure" OpenStep applications includes Windows 95, Windows NT, Mac OS, and Rhapsody users. That's a big market!

Using a technique my friend Leonard Rosenthol has dubbed "obese binaries," it is even possible to ship a single properly packaged application which can run on all the target platforms. Basically, all you have to do is recompile your program multiple times.

If you use Java to write your OpenStep application, you don't even have to recompile!

Comparison to the Cross-Platform Alternatives

I think that OpenStep is superior to the current major alternatives for cross-platform development, although 100% pure Java is a serious contender.

- Web CGI gateways and server plug-ins. These are OK for simple tasks, but they are very limited. State is a particularly difficult problem, although WebObjects does help with this problem. Human interfaces are abysmally limited, even with the help of Java applets.
- There are several commercial cross-platform development products, but they are expensive and not as advanced and rich as OpenStep. 100% pure Java. Java is an immature technology, although the experts predict it will only take perhaps another year for it to become really useful for serious cross-platform application development. The AWT and xFC frameworks are nice, but not nearly as good as OpenStep. Finally, because they are interpreted, Java programs are slower than compiled OpenStep programs. Even with all the advances in JIT technology, this will always be true (although the degree to which it will be true in the future is a matter of much hot debate).
- 100% pure Java is certainly the closest reasonable competitor to OpenStep for cross-platform development. Mac developers are busy making the difficult decision between these two directions as we speak!

Conclusion

Rhapsody has the potential to be a superb system which leapfrogs the competition. If Apple delivers this system on-time and executes it well, and manages to solve the very difficult problem of passing the "Mom test," I think the result will make today's Mac and Windows PCs look like toys.

With Rhapsody we get three complete and mature operating systems in one package: Mac OS, OpenStep, and UNIX. We get close to 100% compatibility for old Mac programs. We get the best Java platform on

the planet. We get a superior object-oriented development environment for rapid application development. We get an exciting cross-platform strategy.

In our higher education environment here at Northwestern, I think Rhapsody would be a first-class platform for every kind of computing we do:

- Teaching of all kinds, and teaching programming in particular (classic UNIX programming, object-oriented programming using OpenStep, or Java programming).
- Research of all kinds, including science and engineering, where the UNIX tools would be very attractive.
- General office productivity, using both classic Mac OS software and new native Rhapsody software.
- Servers. Rhapsody has everything servers need, including good I/O and networking performance, memory protection and preemptive multitasking, and plenty of different kinds of UNIX and non-UNIX server software (including Apache). While today's NeXT OS products do not scale very well for server use, Apple has a server engineering team working on solving this problem.
- In-house cross-platform software development (using OpenStep).
- Distributed computing (using PDO).
- Business computing (using EOF).
- Web development and deployment (using WebObjects).

I'm excited about Rhapsody, more excited than I've been about any Apple technology in years, and I hope you are too. 🦾

John Norstad

Kelly's Favorites from BMUG's Little QuickTime Web Page

QuickTime Movie Tips from Stern and Lettieri

by Kelly Pernell

I've been interested in QuickTime™ movie making on the Mac for a few years now. I was partly introduced to the technology by the authors of BMUG's Quicker QuickTime, Judith Stern and Robert Lettieri. BMUG's TV-ROM and TV-ROM Too CD-ROMs, produced by Junior Hansen, Jr., Robert Lettieri, and Judith Stern were what first got me interested in the technology. I thought it was so cool to put video clips on the computer.

Well, for the past year, Stern and Lettieri have kept BMUGers up to date with QuickTime through their Little QuickTime page that's located on the BMUG Web Site (www.bmug.org). This wonderful "little" page—it's huge actually—is filled with very useful tips on making movies as well as industry news on practically everything in the multimedia world. I highly recommend to those interested in QuickTime to check out this Web site.

To give you all a sample of what you'll find there, here are a few of my favorite "How To's" from Stern and Lettieri. These tips are located in the archive section of their Little QuickTime Page.

How to Add a Logo to a Movie

Using MoviePlayer, you can move and resize visible tracks within the movie window. Here we'll show you how to use this feature, as well as QuickTime's transparency capabilities to add a small graphic logo to your movie.

1. Create a small graphic which will be your logo, using any graphic editor (Photoshop, ClarisWorks, whatever). Leave what you want transparent white.

2. Select your logo (using Select All or a selection tool) and copy it (choose Copy from the Edit menu).

3. In MoviePlayer, open the movie to which you'd like to add your logo.

4. Choose Select All from the Edit menu so that the entire playbar becomes black, then hold down the Command and Option keys, and select Add Scaled from the Edit menu. (For more info on Add Scaled, see our How-To on 12/9/96.)

You have just added a video track containing the graphic to your movie; since you selected the entire movie, the graphic was pasted in for the duration of the movie.

5. Choose Get Info from the Movie

menu, and in the Get Info window select Video Track 2 in the left pop-up and Size in the right pop-up. (Video Track 2 should be the track containing the logo graphic. However, if the movie you started with has more than one video track, then the graphic may be in a track with a higher number than 2; you should choose the highest numbered video track.)

6. Click Adjust. In the movie window, the graphic will appear with a red border.

7. Click in the middle of the graphic and drag to where ever in the movie window you'd like the logo to appear (probably the lower right corner). If you want to resize the graphic, you can also click on any of the corners and drag in or out to shrink or stretch the graphic. (However, it's best to start with a correctly sized graphic before you add it to the movie.)



[Figure 1.]

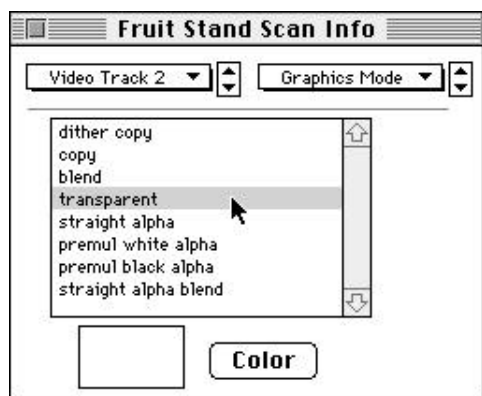
8. Click Done.

You've added the logo. Let's give it a transparent background:

9. From the right pop-up in the Info window, choose Graphics Mode.

10. In the list that appears, click on Transparent.

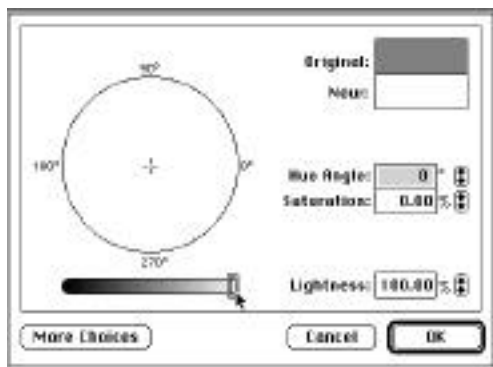
[Figure 2.]



11. Click on the Color button.

12. In the resulting dialog, move the slider under the color wheel all the way to the right. (The value for Lightness will become 100.)

[Figure 3.]



13. You have just designated pure white as the color to be transparent.

14. Click OK.

Now you should have a movie with a logo with a transparent background.

How to Add and Search for a Text Track

To add an invisible text track that contains key words that can later be used to find points in the movie:

1. Open the movie you want to index in MoviePlayer.

2. Choose Get Info from the Movie menu, and in the right pop-up choose

Time. (The left pop-up should have Movie chosen.)

3. Open SimpleText (or some other text processor). Set up your windows so you can see the movie, the Info window, and the Text window.

4. Type {QTtext}{timeScale:30} in the first line of the text window.

[Figure 4]



5. Click on the movie you're indexing, and move the slider to a location which you'd like to index.

6. Click in the text processing window and on the next line, type in brackets the current time as it appears in the Info window, a Return, and the text that you want to use to index this location.

7. Repeat the previous two steps for each location you want to index. After the last word, type a Return, and enter, in brackets, the duration that's listed in the Info window.

8. Save the text file.

9. In MoviePlayer, choose Import from the File menu, locate the text file you just saved, and click the Convert button.

10. You get a standard Save dialog box.

11. Click Save.

12. A new movie, which contains a text track only, appears.

13. From the Edit menu, choose Select All and then from the Edit menu again, choose Copy.

14. Click on the movie you're indexing and move the slider to the beginning of the movie. (All the way to the left.)

15. Holding down the Option key, choose Add from the Edit menu. The text track is pasted above the video

track.

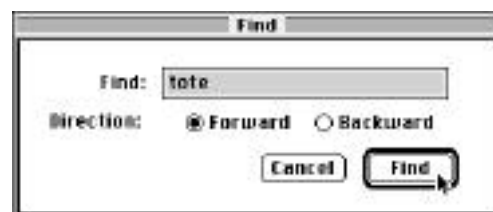
16. From the Edit menu, choose Enable Tracks, and in the resulting dialog box, click on the line that says text track, so that the button changes to OFF, and the text track in the movie window disappears.

[Figure 5]



17. To test your indexing scheme, choose Find from the Edit menu, and type in one of the key words you entered in the text file.

[Figure 6]



How to Create a Chapter List

A chapter list is a pop-up menu that appears in the standard controller of a QuickTime movie. It gives users a way to quickly get to points in a movie.

[Figure 7]



To create a movie with a chapter list, you'll first need to have a tool, Chapter List Maker. You'll also need MoviePlayer 2.1 or later.

You can get Chapter List Maker from the CLM Download Page at http://www.dvision.se/CLM_Download.html

You can get MoviePlayer from the QuickTime Software Web page at <http://quicktime.apple.com/sw/>

1. Make sure you have a movie that contains at least one sound or video track, and that is at least 275 pixels wide.
2. Add a text track that contains the text, timed appropriately, that you want to appear in the chapter list. You can skip the step where you disable the text track, however. (We recommend using Import rather than the Add function for this; importing is probably faster and less likely to produce errors.)
3. Save the movie. If you're going to want the movie to be playable on the Web, make sure to save the movie as self-contained and playable on non-Apple computers.
4. Open Chapter List Maker.
5. In the Do... menu, choose Make Chapter List.

[Figure 8]



If your movie has both a sound and a video track, you'll see Make Chapter List twice; for the most part it makes no difference which you choose. The only difference between choosing one over the other occurs if you later disable a track; for example, if you choose the Make Chapter List menu item below the disabled Video Track item (which links the chapter list to the video track), and later disable the video

track, the chapter list will disappear.

When you choose Make Chapter List, the text track should disappear (if it was visible), and a chapter list should appear. (If the chapter list does not appear it may be because the movie isn't wide enough. You can see the chapter list by stretching out the movie using the Size box in the lower right corner of the window.)

6. Choose Save As... in the File menu, and save your movie.

The chapter list will be accessible whenever you open the movie in MoviePlayer or any application that uses the standard controller (including Netscape with the QuickTime plug-in).

How to Add Scaled

Normally, when you "Paste" data into a movie, that data is inserted at the point in the movie where the slider is, pushing any existing data so that it plays after the inserted data. In our How-To on downsampling an audio track, we described how to "Add" data, so that it would play at the same time as the existing data. A third option is to "Add Scaled"—have the data inserted into the movie for a specified amount of time. This is useful when you have a still graphic or text that you want to place in a movie, or even time-based data (video or audio) that you want squeezed or stretched to fit into a selected amount of time.

In this example, we'll show you how you'd insert some text into a movie for a given amount of time, but the same technique could be used to insert any type of data—video, sound, music, still image—into a movie.

1. Open a word processor and type a line of text.
2. Select and copy the text that you just typed.
3. Open a movie in MoviePlayer.
4. Select a portion of the movie, by holding the Shift key while you drag.

[Figure 9]



5. Hold down both the Shift key and the Option key, while pulling down the Edit menu, and choose "Add Scaled." The text is inserted for the duration of the selection, rather than the default 2

seconds that it would be inserted had you held down only the Shift key, and chosen "Add." If the data was time-based (video or audio), it would be sped-up or slowed-down to fit the duration specified by the selection.

How to Make a Startup Movie

To make a movie that plays every time your MacOS computer starts:

1. Locate a QuickTime movie, and rename it "startup movie."
2. Place it in your System Folder. (You can drop it on top of the System Folder for easy placement.)

Now when you restart your computer, that movie will play. (You can type Command-Period to stop the movie.)

Other Tips

- If you save the movie as double-sized, by choosing Double Size in the Movie menu in MoviePlayer, it'll play double-sized as a startup movie.
- It will work just as well to create an alias of a movie, rename the alias "startup movie," and move that file into the System Folder.
- It's not a good idea to use a movie that has a music track as a startup movie, since startup movies play before the QuickTime Musical Instruments extension loads, resulting in a really bad sounding movie.
- You definitely don't want to use a QuickTime VR movie as a startup movie; it just puts up a white frame.
- You also can't use a QuickDraw 3D movie; it just puts up a white frame. 

Copyright © 1997 QuickTime How To's, Stern and Lettieri. All Rights Reserved.

Twaddle About Microsoft

by Robert K. Morgan

There's some "Twaddle" being circulated by some people about Microsoft "abandoning" ActiveX/OLE and OLE in favor of Java, and not the 100% Pure Java that is open and cross-platform. FWIW, don't listen to these rumblings as there is no way Microsoft can do it in a vacuum, nor is it something that WinWorld would suffer gladly.

We won't get into all the details here, but if Microsoft were to abandon ActiveX/OLE then it would have to rewrite everything they have: Win95, WinNT, Office97, all their applications and there would be no ActiveDesktop. Not to mention all of the ISV's who write applications for the WinTel platform.

Aw, what the heck, might as well. Lest we get inundated with queries as to what we were referring to.

Here's what some are promulgating:

ActiveX Was a Response to Java

Just about everyone who knows that Java was only announced 2 years ago, knows that Java wasn't the threat that it currently is to cause Microsoft to pump out that seriously flawed "Recycled OLE" known as ActiveX which is a "Three Mile Island" waiting to happen at a plethora of locations. ActiveX was more of a response to Netscape's "Plug-ins" than anything else.

ActiveX is a Hick Cousin to Java

We're sure Mr. Gates is quite comforted by the fact that people who are boosting Microsoft are calling ActiveX a "hick cousin" to Java. In fact, we're certain that those describing ActiveX as less than optimal just make the folks at Redmond all aquiver with pride.

OpenDoc will only exist in Rhapsody as part of the "Blue Box" which will run MacOS 7.X/8.X legacy applications Rhapsody Native "Yellow Box" applications will utilize Java and WebObjects

Microsoft is Quietly Abandoning ActiveX

Last we heard, Microsoft has no intention whatsoever of abandoning ActiveX and has even resisted the calls by IS/IT pros to pull ActiveX until all of the security flaws have been fixed. Flaws that Microsoft has known about "from the git go" but rushed ActiveX out onto the market anyway.

As for abandoning ActiveX, Microsoft would have to perform major rewrites of all its Operating Systems, Software, ISV rewrites, etc. to "abandon" ActiveX/OLE; and that's something they couldn't do in a vacuum.

Microsoft—unlike Apple—Knows When to Cut Its Losses

If this isn't an example of "The World Turned Upside Down," we don't know what is.

In the 14 Mar 97 Restructuring Announcement by Apple, OpenDoc was "abandoned" by Apple in favor of continuing its integration of Java into its OS and software which was begun with the Sun/Apple Alliance in 1996.

OpenDoc is being kept as part of MacOS 7.X/8.X but will be replaced with Java and WebObjects in Rhapsody. OpenDoc will only exist in Rhapsody as part of the "Blue Box" which will run MacOS 7.X/8.X legacy applications. Rhapsody Native "Yellow Box" applications will utilize Java and WebObjects.

As for the Microsoft to attempt an embraced and enhanced Java, Microsoft wants to have its own proprietary version of Java, which defeats the purpose of Open Standards, as well as encapsulating Java into ActiveX.

Ergo, those people promulgating this point of view are totally off base.

ActiveDesktop

Their discussion of ActiveDesktop also talks about how it is going to take over Windows, and then they start talking about IE 4.0 that is going to be launched later this year, as yet another proof that Microsoft is "abandoning" ActiveX/OLE. Good Lord, this is fantasy.

Active Desktop totally relies on ActiveX & OLE to work. And with the known security threats of ActiveX, it will be like leaving the bank for the night with the front door unlocked, the alarm off and the vault wide open. Everything is okay as long as honest people remain honest and the crooks don't realize what you have done. Do it long enough and you know the rest. And please, no assertions about the security features of ActiveX controls with AuthenticCode, etc.

Active Desktop totally
relies on ActiveX & OLE to
work. And with the
known security threats of
ActiveX, it will be like
leaving the bank for the
night with the front door
unlocked, the alarm off
and the vault wide open.

facts won't alter reality unless it's an attempt to talk Microsoft into something that it doesn't want to do. Enough said. 

This article was taken off of Apple Recon's Web site. For more commentaries and analyses on Apple Computer, check out Apple Recon's site at http://www.geocities.com/WallStreet/7744/apple_recon.html

Copyright © 1997 Recon for Investors. All Rights Reserved.

Copyright © 1997 Echo 4
Communications / Recon For Investors
(RFI). All Rights Reserved

Robert K. Morgan may NOT be the author, but I'm going to find out when I send him a message on how many articles we are going to use from the Apple Recon Web Page.

Ergo, unless Microsoft has totally trashed ActiveX without telling its ISVs, etc., as long as there's an ActiveDesktop there's going to be ActiveX/OLE. And as long as there is ActiveX/OLE, we don't want it anywhere near anything we use.

So, Who Cares About Them Spreading Twaddle?

Well, we do, for one. And so do a lot of those people who develop, buy and use Microsoft products. And, we also don't want people querying us about all of the above. Better to put it out now and refer them to a link rather than having to send out repeated explanations.

However, if there is real and concrete evidence that Microsoft is "actively abandoning" ActiveX, please feel free to contact us and "Actively Educate" us. But, we need hard information and not what someone heard at a Microsoft booth.

Bottom Line? RFI considers this latest round of "twaddle" as being the result of people trying to stem the growing flood of "negativism" that has been building in the general media, etc.; especially about ActiveX/OLE. However, current known

A BMUG Break for Humor

A Few Jokes from Planet BMUG's Humor Archives

Ethical Treatment of Software

NEW YORK—People for Ethical Treatment of Software (PETS) announced today that more software companies have been added to the group's watch list of companies that regularly practice software testing. "There is no need for software to be mistreated in this way so that companies like these can market new products," said Ken Grandola, spokesperson for PETS. "Alternative methods of testing these products are available."

According to PETS, these companies force software to undergo lengthy and arduous tests, often without rest, for hours or days at a time. Employees are assigned to "break" the software by any means necessary, and inside sources report that they often joke about "Torturing" the software. Grandola said the software is kept in unsanitary conditions and is infested with bugs. "It's no joke," said Grandola. "Innocent programs, from the day they are compiled, are cooped up in tiny rooms and 'crashed' for hours on end. They spend their whole lives on dirty, ill-maintained computers, and are uncereemoniously deleted when they're not needed anymore."

"We know that alternatives to this horror exist," he said, citing industry giant Microsoft Corporation as a company that has become successful without resorting to software testing.

If Dr. Seuss Wrote Technical Manuals
We'd Get...

If a packet hits a pocket on a socket on a port,

And the bus is interrupted as a very last resort,

And the address of the memory makes your floppy disk abort,

Then the socket packet pocket has an error to report!

If your cursor finds a menu item followed by a dash,

And the double-clicking icons put your window in the trash,

And your data is corrupted 'cause the index doesn't hash,

Then your situation's hopeless, and your system's gonna crash!

If the label on your cable on the gable at your house,

Says the network is connected to the button on your mouse,

But your packets want to tunnel to another protocol,

That's repeatedly rejected by the printer down the hall.

And your screen is all distorted by the side effects of gauss,

So your icons in the window are as wavy as a souse,

Then you may as well reboot and go out with a bang,

"Cause as sure as I'm a poet, the sucker's gonna hang!

When the copy of your floppy's getting sloppy on the disk,

And the microcode instructions cause unnecessary RISC,

Then you have to flash your memory and you'll want to RAM your ROM,

Quickly turn off your computer and be sure to tell your mom!

True Stories from Tech Support

- Compaq is considering changing the command "Press Any Key" to "Press Return Key" because of the flood of calls asking where the "Any" key is.

- AST technical support had a caller com-

plaining that her mouse was hard to control with the dust cover on. The cover turned out to be the plastic bag the mouse was packaged in.

- Another Compaq technician received a call from a man complaining that the system wouldn't read word processing files from his old diskettes. After troubleshooting for magnets and heat failed to diagnose the problem, it was found that the customer labelled the diskettes then rolled them into the typewriter to type the labels.

- Another AST customer was asked to send a copy of her defective diskettes. A few days later a letter arrived from the customer along with Xeroxed copies of the floppies.

- A Dell technician advised his customer to put his troubled floppy back in the drive and close the door. The customer asked the tech to hold on, and was heard putting the phone down, getting up and crossing the room to close the door to his room.

- Another Dell customer called to say he couldn't get his computer to fax anything. After 40 minutes of trouble-shooting, the technician discovered the man was trying to fax a piece of paper by holding it in front of the monitor screen and hitting the "send" key.

- Another Dell customer needed help setting up a new program, so a Dell tech suggested he go to the local Egghead. "Yeah, I got me a couple of friends," the customer replied. When told Egghead was a software store, the man said, "Oh, I thought you meant for me to find a couple of geeks."

- Yet another Dell customer called to complain that his keyboard no longer worked. He had cleaned it by filling up his tub with soap and water and soaking the key-

board for a day, then removing all the keys and washing them individually.

- A Dell technician received a call from a customer who was enraged because his computer had told him he was “bad and an invalid.” The tech explained that the computer’s “bad command” and “invalid” responses shouldn’t be taken personally.

- An exasperated caller to Dell computer tech support couldn’t get her new Dell Computer to turn on. After ensuring the computer was plugged in, the technician asked her what happened when she pushed the power button. Her response, “I pushed and pushed on this foot pedal and nothing happens.” The “foot pedal” turned out to be the computer’s mouse.

- Another customer called Compaq tech support to say her brand new computer wouldn’t work. She said she unpacked the unit, plugged it in, and sat there for 20 minutes waiting for something to happen. When asked what happened when she pressed the power switch, she asked “What power switch?”

And the Ever Famous...

True Story from a Novell NetWire SysOp

Caller: Hello, is this Tech Support?

Tech Rep: Yes, it is. How may I help you?

Caller: The cup holder on my PC is broken and I am within my warranty period. How do I go about getting that fixed?

Tech Rep: I’m sorry, but did you say a cup holder?

Caller: Yes, it’s attached to the front of my computer.

Tech Rep: Please excuse me if I seem a bit stumped, it’s because I am. Did you receive this as a part of a promotional, at a trade show? How did you get this cup holder? Does it have any trademark on it?

Caller: It came with my computer, I don’t know anything about a promotional. It just has “4X” on it.

At this point the Tech Rep had to mute the caller, because he couldn’t stand it. The caller had been using the load drawer of the CD-ROM drive as a cup holder, and snapped it off the drive.

Telecom Definitions

Modem: What landscapers do to dem

lawns.

Token Ring: A virtual engagement gift.

Ethernet: A device for catching the Ether Bunny.

DataPac: A size 14 girl in a size 8 bikini.

Asynch: A place to wash your hands.

Bisynch: The place where Elton John washes his hands.

BBS: Tall tales told by insects that produce honey.

ASCII: Ancient god of Telecommunications. Rumored to give vast amounts of data to believers. Hence, the phrase “ASCII and you shall receive.”

Block Parity: One heck of a good time.

Carrier Detect: Raison d’etre for premarital blood tests.

File Transfer: Procedure followed by Information Center staff who are tired of their present jobs.

Hayes Compatible: Prone to riding with a grizzled old cowhand who sings off-key. Gene Autry is the industry standard.

Serial Interface: A spoon.

Terminal Emulation: A function performed by a canary that lays on its back with its legs in the air.

XMODEM: A device on the losing end of a lightning encounter. ⚡

Reviews

The Sky Opens Up

A Comparison of Six Astronomy Programs

by Scott Beamer

We live in exciting times. It seems to me the Hubble space telescope has a similar impact on our times to what Galileo's first telescope had in his age. The advent of today's high powered Macs with CD-ROM drives has given the opportunity for a similar exponential rate of growth for desktop astronomy software.

Here is a comparison of six programs. They conveniently break into two groups. Three are sky simulator programs, intended for those with significant knowledge of astronomy. As each program is the work of a single individual or a small team, each exhibits more unique personality than one might expect in competitive software.

Voyager II from Carina Software in the San Francisco Bay Area, is the work of a zealot dedicated to astronomy. RedShift 2 of Maris Software, is the work of Russian programmers and astronomers from Moscow (they dedicate the program to the brave men and women of the Russian space program), and Starry Night from Sienna Software of Toronto Canada was originally a Shareware product from a small group of young people.

The second group consists of three primarily mass market products intended for younger people. Don't be surprised though, if older people who spend some time with any of these three "junior" programs find it time well spent. These products are: Sky Gazer (Carina Software, a junior version of Voyager), Solar System Explorer (Maris Software), and Eyewitness Encyclopedia of Space and the Universe, a DK MultiMedia CD that also includes a small sky simulator module. While you might find any of these products very interesting, choosing the right one for you may require some thought.

The Heavyweights

The first desktop sky simulator was Voyager for the Mac, a groundbreaking product, though it fit on a single 800K floppy disk. Today's Voyager II version 2.06 fits on a 1.4-meg floppy, but it comes with a CD-ROM filled with 300 megs of astronomy photos and the Hubble star guide containing 19 million celestial objects. If you don't limit the amount shown in a particular view, it turns the black night sky grey with dots of light (See Figure 1).

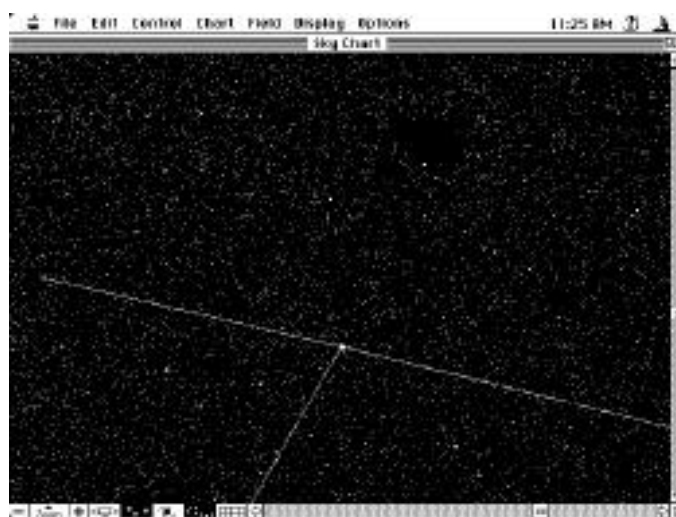


Figure 1

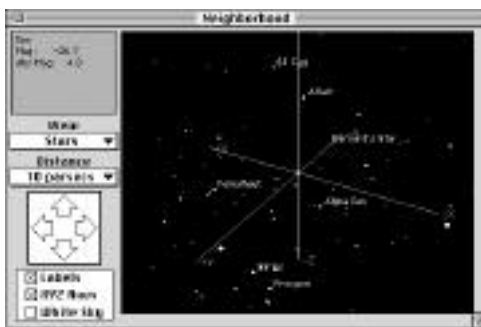


Figure 2

Figure 1. Displayed in Voyager II, the night sky turns grey when using the 19 million star database from Hubble. Note the apparent holes in the sky. These are aberrations in the Hubble Guide Star Catalog.

As the pioneer program in this field, Voyager remains the standard by which others are measured. It is a piece of software made by a zealot for other serious astronomers. Voyager is not an unreasonable piece of software for a professional astronomer to own. While they would certainly have much more powerful comput-

ers and appropriate software available to them, they can still use Voyager as a handbook. Carina also offers a suite of companion products for the very serious amateur or teacher. One of those products, Sky Pilot, allows Voyager to point and control a telescope driven by electric motors (such as a

Meade LX200, though Celestron and others can use it as well).

Another interesting product Carina intends to offer is Voyages Through Time and Space (Wadsworth Publishing, \$40), an interactive lab manual that uses Voyager II to demonstrate astronomical concepts. It was not available in time for this review. Voyager II version 3.0, a major update, is expected to be released before you read this.

Voyager II offers a level of reports and control not attempted in other desktop products. The three heavyweight programs being compared here each offer to find eclipses and conjunctions far in the past or future. They permit the viewer to modify what objects will be seen in the sky by a range of criteria. They permit viewing from anyplace in the universe, including from the nose of comets and probes. It is even possible to add your own celestial object with orbit, such as a comet, asteroid, or space probe. One can save settings files to quickly get back to the settings one has found interesting. They also permit the making of QuickTime movies, so anyone with a QuickTime movie player can see a sequence viewed in any of these products.

The special features of Voyager go still further, though. Another window allows one to view the orbit of binary stars. The Planet Reports menu offers fifteen reports ranging from an annual report on the date of the moon's phases to current distance from earth of all other planets. There is an Ephemeris report that will print out a list of positions of any of fifteen celestial bodies over time. A particularly unusual item is the Neighborhood window (See Figure 2). This displays a selected group of astral objects in relation to our sun. It then permits the user to rotate the objects through three dimensions to appreciate their spacial relationships.

Figure 2. The Neighborhood window in Voyager II centers on the sun and shows nearby celestial objects. The image can be rotated in 3-D to better understand the spatial relationship between neighboring objects.

In its interface, reports, manual, and Web site, Voyager II shows by far the least influence of mass market appeal of any of the six products considered here. At times, it can appear a bit amateurish and home made, but the feel is more that of a product for a laboratory. The Web site has a plain gray background and no graphics at all, not even elaborate text. There is a small linked list of contemporary astrophotos to view, product information, and a short list of linked Web sites to important astronomical sites.

RedShift 2

Maris Software has released RedShift 2 as a mass market product. While it contains sky simulator software that is of similar power to Voyager, it has a much smaller

database of celestial objects. The focus is instead, on astrophotos, tutorials, guided tours, and space probes.

The Guided Tours and Photo Gallery have a useful set of buttons and links to aid one in navigating through the material available. Even a dictionary of astronomy is included and linked to the information that appears when any celestial object is double clicked (See figure 3).



Figure 3

Figure 3. RedShift 2 has a nicely linked set of controls from the information window. Here, Phobos, a moon of Mars is shown with its dictionary entry and photo-gallery item.

The Photo Gallery makes it easy to navigate pictures in RedShift 2, and they are well annotated. However, the choice of pictures at times is even bizarre. When zooming in on celestial objects, the pictures are of too low resolution. Poor color and heavy pixelation are common. I was similarly disappointed by some of the Guided Tours. They were uninformative and tedious, while others were fairly good.

Because of the Russian connection, RedShift 2 has the largest catalog of space probes whose voyages it can recreate. You can observe the flights from a distance or ride on the nose.

A significant portion of the reports of Voyager are also found in RedShift 2, but there is one unique RedShift one. There is both a chart and report of the best visibility times for a celestial object from a particular point on the earth (See Figure 4).

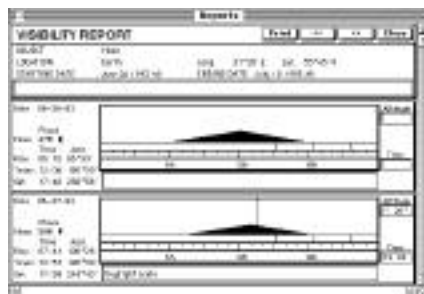


Figure 4

Figure 4. In RedShift 2, the Visibility Window shows the conditions for observing an object for several days. The chart is confusing but precise.

I find the sky viewer of RedShift 2 the least appealing of these three programs. The celestial objects are displayed with dots or symbols varying in size and color to show what sort of object they are. While this conveys a great deal of information, it gives the screen a look of a confetti shower rather than the night sky.

The RedShift CD works with both Mac and Windows. Its look and feel is that of a Windows program that also works on the Mac. On a Macintosh, the main menu bar (including the Apple menu) is not available. Command keys do not work. Even Windows users may find the look and feel of the Sky View Window controls a bit strange. In the end, I decided it reminds me a bit of the controls of a Russian space vehicle.

The manual of Red Shift 2 is the equiv-

The RedShift CD works
with both mac and
Windows....In the end I
decided it reminds me a
bit of the controls of a
Russian space vehicle

alent of 34 pieces of typewriter paper, folded over. It is well illustrated and the most complete of the three sky simulator programs considered here.

Starry Night

Though it started life as a Shareware product, Starry Night's fame has grown by leaps and bounds since it was released as a commercial product this year. It has won a basketful of awards and was chosen Most Elegant in Apple's "Heidi" awards (Human Interface Design Excellence). There seems

Figure 5. *Starry Night* has its zany moments such as showing your feet to indicate which direction you are looking



Figure 5

little question that *Starry Night* took *Voyager* as the basic model to begin with, but it has moved off strongly in its own direction, and the two programs are very distinct today.

The personality of *Starry Night* is an interesting combination of photographic realism in portraying celestial objects, and quaintly amateurish graphics in displaying non celestial objects, such as your feet or the horizon. You can turn the feet on to orient you when you are floating in space. The choices are tennis shoes or a space suit (See Figure 5). The horizon can be set to any of seven bizarre cartoon landscapes, including aliens and dinosaurs. The touches of humor found throughout the program are as if the programmer of *Kids Pix* was on the interface team.

Figure 5. *Starry Night* has its zany moments, such as showing your feet to indicate which direction you are looking.

Easily the most spectacular effect of *Starry Night* is the ability to zoom in from a star that is only a point of light until it becomes the screen-filling photo of a planet or a multi-colored cloud of light of a nebula (See Figure 6).

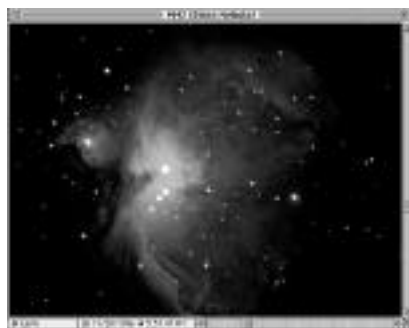


Figure 6

Figure 6. In *Starry Night*, zooming in on planets and some stars will eventually bring a screen-sized image of it. Here is the nebula from a star in Orion's sword.

Surprisingly, the photograph covering the sphere of the planet can be changed with Cut and Paste if you have another one you prefer. The opportunities for teachers to keep students on their toes seem poignant.

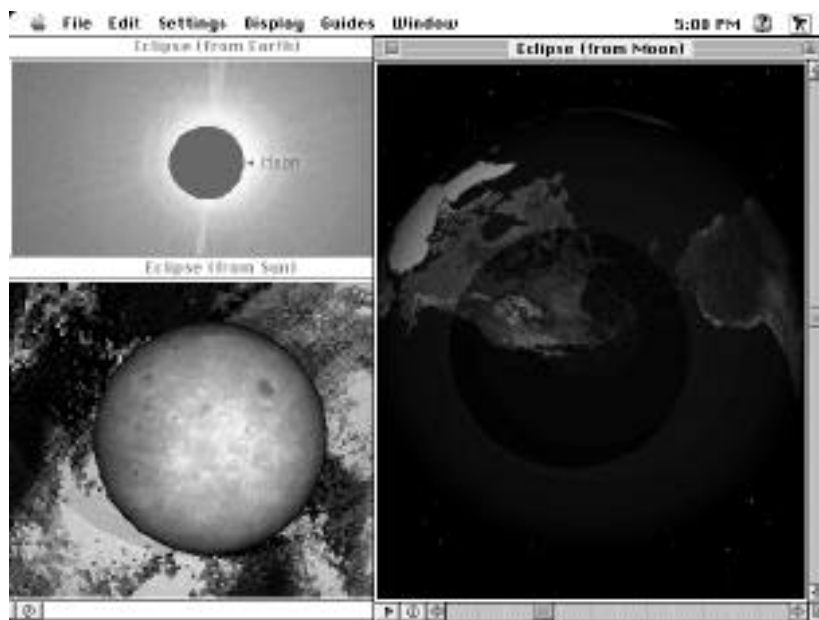


Figure 7

Another feature unique to *Starry Night* is the use of multiple windows. For example, one could arrange them to show views of a solar eclipse from Earth, the moon, and the sun simultaneously (See Figure 7).

Figure 7. Multiple windows can be used to great effect in *Starry Night*. Here are three views of the same eclipse running simultaneously.

The only manual provided with *Starry Night* is on the CD. It is clear and well

organized, with a handful of appendices of astral data of interest only to the serious astronomer. However, the number of movies, examples, guided tours, is only a few dozen, with little or no explanation of each provided. There is room on the CD to provide another 100 megs or more of information. It's too bad this wasn't done. With all three of these products, it would seem their Web site would be a nice place for users to exchange settings files or even QuickTime movies of what interesting moments they have had with the software, yet none of the companies supports this.

Choices for Young Users

The second set of three programs considered here are much more accessible for those without significant experience of astronomy. While they all advertise to a target audience of younger users, I suspect the ideal situation is a younger and older user working as a team, either teacher/student or parent/child. I believe this will greatly increase learning and enjoyment for both.

SkyGazer

Sky Gazer version 1.02, Carina's effort to make a program for the younger educational market (they suggest grades 6 to 12 and beginning college) is actually a slightly detuned version of *Voyager II*. There is essentially no change in the interface. The difference is found in the manual, the Guided Tour, and the example material, included.

(they claim this will include everything that can be seen from a backyard telescope) and 600 high resolution photos



Figure 8

Basic concepts such as the seasons and the eclipses are illustrated, and more advanced ones such as precession, meteor showers, and the looping path of Mars are handled as well. My favorite is a series of narrated views of the Zodiac. They are of the quality one might expect at a good planetarium show (See Figure 8).

Figure 8. Sky Gazer has a considerable library of narrated QuickTime movies about several of the constellations and other subjects. In the background is an example from its impressive photo gallery.

The program CD has reduced star catalog and astro photos, but these are still impressive, with a Hubble Star Guide of four million objects (they claim this will include everything that can be seen from a backyard telescope) and 600 high resolution photos.

The problem with this program is that it is as staid and severe as Voyager II itself. The young user will find themselves facing a formidable obstacle to do anything useful with the program once they have viewed the guided tours. Obviously, the software will work best in the classroom.

Solar System Explorer

This is easily the most unusual program of the six considered here. As with RedShift, it was developed in Moscow and released by Maris. Two things make it so unusual. First of all, it has chosen to concern itself with only a very small subset of the area dealt with in the other five programs. As its name implies, Solar System



Figure 9

Explorer does not focus attention outside the orbit of Pluto. Secondly, the software is set up as a flight simulator for space flight.

This game feel should make for healthy sales and is sure to attract young users. The opening sequence could make a whole classroom sit down and shut up as a shuttle blasts off from Earth, (accompanied by electric guitar music) and goes up to rendezvous with a space station orbiting Earth (See Figure 9). Unfortunately, those with Star Wars/Star Trek expectations are in for a big disappointment. This is an educational piece of software disguised as a game. When the kids catch on, it may be difficult to make them pay attention.

Figure 9. The opening sequence of Solar System Explorer is certain to attract Star Trek/Star Wars fans. It is accompanied by electric guitar music, but many with expectations will be frustrated when they discover this is more of an educational product than a game.

The program contains five modules. There is the Navigation room where one can plan a mission to any of the fifteen or so solar bodies featured in the program (nine planets and six moons). This is done on screen with the aid of instruments. The Bridge is where one can control the progress of the space vehicle and observe its movement through the solar system. The Museum is where one can rotate 3-D views of historic probes of both the U.S. and Russia. They can be dismantled and reconstructed; the missions can also be run.

The Library is where one is presented with a considerable quantity of both text-

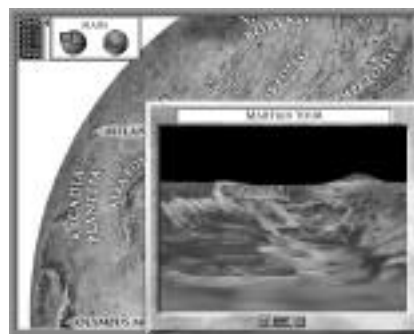


Figure 10

based visual and audio material concerning the planets and some moons of the solar system.

Finally, the Probe Room is where one can launch and retrieve a probe when in orbit around a planet or moon. Considerable data from the probes is charted. When appropriate, actual images from probes can be viewed as if the user were controlling the probe's TV camera (See Figure 10).

Figure 10. Great graphics are commonplace in Eyewitness Encyclopedia of Space and the Universe. In the background is a photographic-quality-labelled map of Mars. In the foreground is a scene from a QuickTime movie of a low-altitude flyover of Mars based on actual probe data.

Because this software chooses a more restricted area of study than the other programs herein considered, it can go into more depth. All in all, this is a fairly interesting exposition of travel among the planets, largely based on historical information gathered in the last thirty years.

The weaknesses of the program are largely those of the other product from Maris considered here. It is a Windows program that also runs on a Mac. The Mac main menu is unavailable including the Apple menu. The graphics are sometimes of poor quality, showing low color resolution and pixilation when none would be expected.

The other problem is the uncomfortable balance between the game style of the program and the more serious level of the educational material. A few kids might be bored as the material is too superficial. Many will be disappointed because there are no laser blasters or aliens. I suspect a significant number will have an enjoyable learning experience. The amount of educational material included is appropriate for the classroom, though some teachers are resistant to the game style of delivery. Also, as the students get older, less will find the game style appropriate.

For me, the biggest weakness in this CD is that it lacks any suggestion of an orderly order of study for the material presented. Instead, it encourages point-and-click browsing,

Eyewitness Guide to Space and the Universe

This CD contains a basketful of modules for the young computer user. Another in the seemingly endless series of Eyewitness multimedia books from DKMM, it is perhaps their most successful example in their attempts to adapt a book to the CD format. (A fuller review of this product can be found in The Spring 97 BMUG Newsletter, pp. 231–2).

The CD contains a significant amount of textual material. It's also well illustrated, including numerous videos. The history of astronomy and space exploration and explanations of the solar system and the cosmos are combined with a sky simulator, a couple of 3-D models of space ships that can be rotated, two games, and a quiz. Overall, the effect is impressive, though I do have qualms about explaining Einstein's General Theory of Relativity and Big Bang Theory to young readers in a few paragraphs.

Highlights of the CD for me are the closeups of some planets, including detailed maps of the Moon, Venus, and Mars, with labels of prominent features (See Figure 10). Even better are the low altitude narrated flyovers of Venus and Mars based on actual data from space probes. Another surprising plus in this program is its 3-page list of Web sites of interest to

young astronomers. While the links aren't hot, the list can be printed.

The sky simulator included in this CD is the weakest of the four considered here, but in many ways, it is the most accessible for those new to astronomy and for younger users. The attached textual material gives novices a good head start at using the sky simulator. There is also a series of exercises that will lead a new user to become familiar with the controls, concepts, and abilities of the sky simulator.

For me, the biggest weakness in this CD is that it lacks any suggestion of an orderly order of study for the material presented. Instead, it encourages point-and-click browsing, which may or may not lead a user through most of the material in a rational order. That, along with the very slick interface trivializes the educational value of the product. I feel the educational material itself is fairly good.

For those who have not had a college introductory course in astronomy or its equivalent, this is the best introduction available among these six CDs. Many will find it is sufficient to fill their current interest in astronomy. Teachers or parents who want to move on to one of the sky simulator programs will find this an excellent introduction, not only to the basics of astronomy, but to using a sky simulator. Many will find this the textbook of astronomy the other programs cry out for, though it is not the level of a college textbook.

Which One Is for Me?

I have no trouble recommending any of these programs to the right person. Level of knowledge of astronomy and price go a long ways towards sorting the choices out. Voyager II is clearly the premier product, suitable only for the professional, teacher, or serious amateur. Starry Night is the attractive alternative. It has about the same sized database of celestial objects and a more approachable interface. It lacks the breadth of astrophotos, demos, and reports. RedShift 2 is the least expensive and has the most explanatory material, including the dictionary of astronomy. Its weaknesses are its database—much smaller than the other two—and its clunky Windows interface. For those looking for the bargain basement special, consider Starry Night Basic, Shareware (\$35).

Among the junior programs, Sky Gazer is the least accessible for young users on their own. Teachers who use Voyager II may con-

sider this as a more accessible alternative for younger students. Solar System Explorer is a deeper study of a narrower field than the other programs here, dealing with the solar system and space travel. It is an uncomfortable mix of a game format and serious educational material. Those looking for a Star Trek style game will be disappointed. Teachers should consider it. Eyewitness Encyclopedia of Space and the Universe is the closest thing to a textbook of astronomy among the programs considered here. Considering its low price, and the fact that it also includes a sky simulator, EyeWitness of Space and the Universe is the logical choice for those new to astronomy and younger users.

The best solution for some may be a pair of CDs. For most, especially in the know, Eyewitness Encyclopedia to Space and the Universe teamed with Starry Night seems to be a powerful combination. For the classroom, Star Gazer and Voyager II could be a more powerful, albeit more serious choice. 

Voyager II version 2.06

List Price \$159.50

Sky Gazer version 1.02

List Price \$ 99.50

Carina Software

12919 Alcosta Blvd. Suite #7

San Ramon, CA 94583

Phone: (510) 355-1266

Orders: (800) 493-8555

Fax: (510) 355-1268

Email: www.carina.com

System Requirements for Voyager II or Sky

Gazer:

Color capable Mac

System 7.0 or higher

2 megs of free RAM

CD-ROM drive (2X for QuickTime movies)

Includes both 68K and PowerMac native versions

Starry Night Deluxe version 2.0

List Price \$89.95

Sienna Software

105 Pears Ave.

Toronto, Ontario

Canada M5R 1S9

Phone: (416) 926-2174

Fax: (416) 926-0370

Email: www.siennasoft.com

Starry Night Deluxe System

Requirements:

Color capable Mac
System 7.0 or higher
8 megs of RAM
CD-ROM drive
Includes both 68K and PowerMac native
versions

RedShift 2

List Price \$54.95
Solar System Explorer
List Price \$49.95
Maris Software
4040 Civic Center Drive
Suite 200
San Rafael, CA 94903
Phone: (415) 492-2819
Email: www.maris.com

RedShift 2

System Requirements:
68040 processor or higher
System 7.1 or higher
8 megs of RAM (16 megs recommended)
Double-speed CD-ROM drive
Thousands of colors recommended

Solar System Explorer System

Requirements:
PowerMac 6100 or later model
System 7.1.2 or higher
8 megs of RAM, (16 megs recommended)

**Eyewitness Guide to Space and the
Universe**

List Price \$39.95
Dorling Kindersley Publishing, Ltd.
95 Madison Ave.
NY, NY 10016
Phone: (212) 213-4800 ext.220
Fax: (212) 213-5240
Orders: (800) 356-6575
Email: www.dk.com

Eyewitness Guide to... System

Requirements:
68LC040LC processor or higher
System 7.0 or higher
8 megs of RAM
Double-speed CD-ROM drive

The Kensington Saddlebag

by G.D. Warner

Transport yourself backward in time with me, if you will ... no, not that far back—powdered wigs scare me! ... There, that's better: December of '95 ... the place: Bloomington, Indiana.

It was at this time that I discovered my need for a PowerBook ... and, naturally, a need for something to carry it in. It was also at this time (sometime during my last frantic days of Net surfing via my Performa 600 before moving out to California for duty on board the USS Carl Vinson) that I discovered an interesting argument in the newsgroup comp.sys.mac.portables about PowerBook bags. One of the respondents recommended a Jansport backpack:

"After having to carry a Targus case in addition to my book-bag, I opted to consolidate by getting a Jansport backpack. This backpack was made to carry a laptop—there's a padded 'envelope' that you can slide the laptop into. This way, it's padded from your back—and padded from your books."—Tae H. Kim

Hmmmm ... a backpack!?

He concluded by writing, "The biggest selling point for me, aside from not having to carry two separate cases, is that I no longer look like I'm carrying an expensive laptop with me. I'm just 'nother student with a backpack. 'Course, one could argue that that wouldn't stop someone from swiping my backpack. Sure—but put me side-by-side with another guy with a backpack and a laptop case, and I think you'll see the difference."

That sold me: not looking like I'm car-

rying a laptop. I began searching for a backpack like the one Tae recommended, but I had no luck. In the meantime, I moved to California, went to Macworld, and started hanging out with BMUG-folks ... and, on the final day of Macworld, I bought my PowerBook 190cs, still without a proper bag to keep it in.

Initially I was hesitant to bring it outside, but when I finally did, my old (unpadded!) Eclipse tank bag (yes, I did own a motorcycle once upon a time, though nobody believes me when



I tell them that for some reason) was pressed into service.

That bag served me well for the 11 years I had it, first riding on my 1977 Honda CB400F's gas tank (which, I suspect, is why it was called a tank bag), next carrying my books for whatever school the Navy decided to send me to, and finally, acting as a surrogate laptop carrier (with several T-shirts for padding). Unfortunately, it began to unravel, and the zippers began to function inter-

mittently. I took this as a sign that it was time to find Something Else.

Fast forward in time with me again to—whoa, too far! Watch out for that air car! Whew, that's better (where'd you learn to drive this time machine of yours, anyway!?) January 1996: Macworld-eve, Berkeley, CA.

On this day, I found myself in ComputerWare, looking at the most interesting laptop bag I've seen yet: the Kensington Saddlebag.

Check these features:

- Removable shoulder strap
- Hideaway backpack straps
- EasyGrip™ foam covered handle
- Self-repairing zippers
- Padded computer compartment
- Lifetime warranty (Even my Mac doesn't have one of those!)
- Of course, there are other features:
- Expandable mesh pockets
- a key holder (yeah—like I'd actually leave my keys in a bag!)
- a zip-down organizer
- an exposed "quick access" pocket
- a removable compartment for files (12.5 inches by 13.25 inches)

The bag is made of water-resistant Codura (I think; it doesn't say anywhere) and comes in solid black, or black and tan. I opted for the solid black one.

I really like this bag. I'm thinking of buying another one one of these days to replace my ailing tank bag (R.I.P.).

One handy feature I especially like is the EasyGrip[™] handle, which makes it easier to pull it on as a backpack ... It takes some practice, though, so your mileage may vary.

While the bag is good as is, I wouldn't mind seeing a few improvements:

- an extra padded compartment (for that big external drive everyone has)
- more expansion, as in accordion-like pleats along the bottom to compensate for those of us who tend to overstuff their bags
- a bigger holder for the cellular phone (big enough to hold my Ricochet modem)
- perhaps a smaller padded compartment for disks and the like
- maybe one in ... denim?!?

Admittedly, the bag does hold quite a bit. Right now, I have the following stuff in mine:

- my Mac (though not at the moment, since I'm typing on it)
- my Zip drive
- the Zip's power adapter
- the obligatory Zip disk
- a SCSI cable
- a pair of Koss TD-65 headphones
- miscellaneous bits of snail mail
- a few floppies
- a couple of CDs
- a Klear Screen kit
- some audio cables
- the power cord to a portable radio
- a Global Village Platinum modem and its power adapter
- a Ricochet modem and its power adapter
- a Universal remote and its instructions (I know they're in here somewhere ...)
- a programmable calculator
- an Apple warranty on my PowerBook's repairs

Hard to believe that all adds up to ... well, whatever it adds up to! This bag is heavy, but the only complaining about all the weight comes from me.

Bottom line: If you have a PowerBook, get one of these, now!

Kensington Saddlebag

Available via catalogs or computer stores

Price: \$80 (approximately) 

Taming the Paper Tiger

A Brief Look at Electronic Form Management and Informed's Designer and Filler 2.0.2 programs

by Michael E. Bradley

The paper tiger is much easier to destroy than it is to defeat. Touch paper with something as simple and elemental as a burning match or a splash of water and poof! It's history. It's useless. But if you attack that same piece of paper with something as complex and terrifyingly powerful as 30 years worth of computers and software and commercial greed and even the Internet, some of the very tools that took us to the moon, well, what you've got is a piece of paper laughing in your face because today the moon still seems a heck of a lot closer than the Paperless Office.

Despite the fact that the phrase "paperless office" is most commonly preceded by the adjective "mythical", it appears we are finally beginning to see a real shift toward acceptance of electronic documents, due in large measure to the Internet. As recently as a couple of years ago it seemed genuinely exotic to register newly purchased software via modem but today it is common to think no more of it than we used to think of dropping a registration postcard into a mailbox. Every day we interact with digital forms on the web, be they questionnaires, search engine queries, our bank statements, and even commercial purchase orders. We send and receive email without a blink. We have made the word "fax" a noun and a verb—an unquestioned part of our work-lives. We idly gossip around our office copiers and scanners without really thinking much about the remarkable imaging and OCR technologies we are now so casually employing. Computers and digital word processing, LANs and WANs, and the Internet have all become as familiar and as navigable as an office parking lot. In short, our social and business environments have

matured to a point where electronic documents have finally begun moving into mainstream usage.

Form creation, form and document management, and related work-flow automation have long been critical pieces of the corporate Information Systems (IS) landscape. Until recently the existing IS world has been chained (and has been chaining us) to the paper-based document model with their often proprietary integrated database solutions that we all know and curse. Whenever we encounter government offices, banks, insurance companies, hospitals, etc., we are buried in red tape and paper tigers. Now, however, as new hardware and software technologies emerge and as we get more comfortable with the basic concepts of digital technologies, IS professionals are beginning to consider and deploy sophisticated electronic document systems to create, distribute both internally and externally, revise, track, extract information from, and store intelligent digital documents of all kinds. There is an emerging revolution in the way we do business and the way we look at the world's information—that is, without paper.

Money, not the simple and obvious elegance of digital paper, is the driving force behind the move to electronic document management. The cost of processing a paper form has been estimated as being as much as 20 times the cost of procuring or creating and producing the form itself, a not inconsiderable chunk of change for any large corporation with millions upon millions of pieces of paper wafting through its offices and hallways each year. The economic advantages of storing paperwork on servers instead of in filing cabinets or even

While perhaps the concept of the Paperless Office remains something of a myth, Informed Designer and Filler offer at least a peek at the elegant possibilities and the immediate realization of the Less Paper Office.

on microfiche, of immediate access to virtually any piece of "paper" anywhere in the corporation, of workers freed from the time-sucking drudgery of manually shoveling physical paperwork to and fro is blindingly clear to the folks whose professional lives revolve around dotted lines and checkboxes and fine print. Fortunately, what's good for the corporations is, in this particular case, good for the rest of us as well.

First released in 1990, Shana Corporation's Informed products, Designer and Filler, are elegant and powerful tools for the creation, manipulation, and management of digital forms in virtually any recep-

tive business environment, from a one-man consulting firm to Apple Computer and NASA, for electronic and Internet and even paper-based form delivery: purchase orders, job proposals, work orders, fax covers, invoices, any form at all.

Although now Windows-ready with the cross-platform release of 2.0, this review is devoted exclusively to the Macintosh version.

The base component of the Informed package is Designer, the application you use to create your form. If you are at all familiar with any graphics layout program from ClarisWorks to PageMaker or QuarkXPress, you'll be immediately familiar with Designer and its environment. You've got your Drawing Palette with Pointer, Text, Line, Rectangle, Oval, Polygon, and Zoom tools, as well as others. You've got your options for manipulating objects such as locking groups, moving to the back, nudging, styling text, leading, etc. In short, it's all there, quite intuitive and comfortably Mac-like, just the way it's supposed to be.

One handy feature in Designer is the presence of contextual pop-up menus. Position the pointer over any object (text, cell, whatever) in the form, click-and-hold the mouse while holding the Control key, and you will get a pop-up menu of commands specific to that object. Very useful.

If you are at all familiar
with any graphics layout
program from ClarisWorks
to PageMaker or
QuarkXPress, you'll be
immediately familiar with
Designer and its environ-
ment

In addition to the common tools and features are the tools and features for creating and executing fields, tables and cells. These elements will hold the live data "filled in" later. All you do is select the Field or Table button in the Tool Palette, create a rectangle of an appropriate size in the workspace, and Designer automatically sets up your field or table with a frame, a title header, the number of columns you specify (for tables), and hot cells waiting to be assigned a format, value or functions (calculations, lookups, etc.) for the digital on-screen entry of data. At this point you can, with little more than a mouse click, set line rules and/or combs inside the cells, and throughout the design process you can resize and reconfigure your objects (including fields and tables) with ease. Checkboxes (there are eight different styles to choose from) are a breeze. You can also embed help dialogs in cells, customized special instructions which readers of the form can invoke while filling out the electronic form. Informed Number Server, another component of the package, will assign numbers to sequences of forms which must be individually accounted.

PageMaker and QuarkXPress are the tools of choice for many professional form designers, and some smaller companies even create workable (if crude) forms with simple word processing software, but Designer is a dedicated form creator with none of the extraneous overhead of PageMaker or QuarkXPress and none of the shortcomings of a lesser package. When printed on paper, the forms produced by Informed Designer can be as clean and professional in appearance as any commercially available pre-printed forms, with the added benefit of having been designed by you for your specific needs.

The other major component of the Informed package is Filler which, at its most basic level, lets you fill in your electronic form as it is displayed on your monitor's screen. This is not a scanned image, this is not a Microsoft Word or WordPerfect document, this is a live document, sort of like a FileMaker Pro file in Browse. You can tab through it, cell by cell, or by point-and-click navigation, filling in the appropriate information as you go. Embedded intelligent hooks (courtesy of the Designer application) allow you to use slack entry in some instances: the entry "n" will appear as "No" in a yes-no Boolean cell, for example, or "2.21.54" will appear as "Feb 21 1954" or

...his is a live document
sort of like a FileMaker
Pro file in Browse. You
can tab through it, cell
by cell, or by point-and-
click navigation, filling
in the appropriate infor-
mation as you go

"21 Feb 54", or whatever format is predetermined by you in Designer. Select from multiple choices in scrolling lists, UPS, FedEx, USPS or whatever for a shipping preference, do automatic on-the-fly calculations, and perform automatic database lookups via a plug-in architecture for FileMaker Pro, Oracle, Sybase, ODBC compliant databases, Butler, 4th Dimension and SequeLink supported databases, according to Shana. If the form's creator has embedded a permission to do so, the form's reader can even adjust pre-configured tables and fields to meet unique needs of his or her data, and you can attach text or voice notes. Digital signatures are also supported via a plug-in architecture (plug-ins for DigiSign and Entrust were included with my copy) for the purpose of approvals and template verifications.

Once the electronic form has been "filled out" and is ready to be returned or passed on, it can be routed from within the Filler application via most email programs, again via a plug-in architecture. On a network, Informed Tracker (yet another component of the package) can follow a given form on its course across the network, giving authorized individuals instant and constant access to its location in the pipeline.

One suite I was not able to test for this article was Informed Filler for the Internet (a separate component included in the Designer/Filler package), which allows you to deliver and retrieve electronic forms via

the World Wide Web. Also outside the scope of this article, unfortunately, is Informed Filler for Newton (a separate product), although I can say the MessagePad 2000 and the Informed software technology seem to be ideally suited. Multi-platform indeed.

The Informed products have been around for seven years and overall show the stability you'd expect from mature software. I did, however, encounter one annoying problem at the very beginning of the review process for this article. After installing the then-current 2.0.1 version on my Power Macintosh 7500, with a 604/132 upgrade processor card, I double-clicked to launch the Designer application only to have it immediately crash and lock up my machine. A grim result I got each and every time I tried to launch it, with and without extensions on. Re-installing on a different volume did not work, so I emailed Shana's tech support and within a few hours got a response directing me to download a private beta of the then-unreleased 2.0.2 updater. Although I remain leery of my tech support person's claim that only two other customers had reported a similar problem and that Shana hasn't been able to define the bug, the updater solved whatever the problem was and I had no further trouble.

My only real disappointment with Informed is acknowledged by Shana in its documentation, a shortcoming due not so much to their software as to the current state of the industry's OCR (Optical Character Recognition) technology. You can scan a printed document and import that PICT or EPS image into Designer but, once there, the best you can do is use it as a visual source to trace out a new Informed template. Not elegant and not efficient, but something we have no choice but to live with—for now.

As of this writing, the street price of Informed Designer 2.0.2, which includes one licensed copy of Informed Filler and the other individual components mentioned above, both Macintosh and Windows versions included, is about \$150. Additional copies of Filler, necessary for each individual user in a network environment, are about \$100 each, although Shana does offer a variety of licensing options.

While perhaps the concept of the Paperless Office remains something of a myth, Informed Designer and Filler offer at

least a peek at the elegant possibilities and the immediate realization of the Less Paper Office. 

Michael E. Bradley

Shana Corporation
9744 45th Avenue
Edmonton, Alberta T6E 5C5
Canada
Order Desk: (800) 386-7244
Fax: (403) 437-4381
Email: info@shana.com
World Wide Web: www.shana.com

Macworld's PageMaker 6.5 Bible

A Book Review

by John Harrold

Although this is a book review, I have also tried to provide an overview of Adobe PageMaker's latest version, 6.5. If you're looking for a review of PageMaker by someone who makes their living with it, you may as well skip over to game reviews or something else. On a good day I'm a competent amateur in the page layout arena—but not a pro.

I stumbled into the world of page layout through the back door. Years ago in the Midwest, I happened upon the final close-out sale of a chain of computer stores. They had given up store fronts and were liquidating software at prices stunningly low; so low that I'm embarrassed to mention them even now—but I will say that PageMaker 4.2 was less than \$100. Far less, or I would never have bought it. (I knew nothing about the field then, and the thought of spending \$600—about \$900 list—for a program seemed ridiculous.)

Anyway, I brought it home, scratched my head, then began experimenting. The occasional flyer request from friends became more frequent, then other projects such as newsletters would find their way to my door. I picked up Robin Williams' book, *The Mac Is Not A Typewriter*, then branched out into other design books. (Incidentally, stay away from Robin Williams; her stuff can lead you astray. Next thing you know, you may be poring over font catalogs camouflaged inside *Sports Illustrated*—or spending the kids' lunch money for just one more typeface...) For those unfamiliar with PageMaker, it (and its rival QuarkXpress) are the two 400-pound gorillas in the field of page lay-

out. Either allows you to produce professional level designs of just about anything desired. And PageMaker certainly takes up a gorilla's share of space. I selected everything I wanted (but not everything avail-

Like many "how to" books,
this one begins with the
premise that the reader is
a beginner, and builds
from there. Although
many people would do no
more than skim this
section, I think the
concept is a good one

able) then was surprised to see this would require over 70 megs of hard drive space. (Thankfully floppies are becoming an endangered species; installing with them would not have been fun.) Hard drives always need cleaning anyway, right? The installer ran smoothly, leaving a log of its

activities, so I was up and running.

Macworld's PageMaker 6.5 Bible is divided into four main parts: introduction; followed by learning; mastering; then putting PageMaker to work. These four areas are further divided into a total of seventeen chapters, each of these expanding upon the four basic concepts.

The book lacks a glossary—a weakness in my opinion. Its index is barely over two dozen pages for a book right at 600 pages of actual text, and I think this could be better. (For comparison, I checked an older Macintosh Bible of approximately 1,000 pages. That glossary was almost 70 pages, and the index 140—at a smaller point size of text, also!)

Although page layout has been an area of interest for some time—and I do try to keep up with whatever is coming down the pike—I miss some of the new and forget some of the old. For example, I very seldom use *ciceros* (a measure of type size) and could not remember the specific definition. It was a bit annoying to first find the term in the index, guess which entry defined it (I arbitrarily picked the lowest page number) then search for a definition. I expect this could become a major nuisance for someone new to PageMaker or, worse yet, new to the Mac. Anyway, a technical book should have an operational glossary and index.

Also included is a CD containing a demo version of PageMaker 6.5, Acrobat Reader, plug-ins, stock photos, and tutorials for a flyer, newsletter and catalog.

Like many "how to" books, this one begins with the premise that the reader is a beginner, and builds from there. Although many

people would do no more than skim this section, I think the concept is a good one and read through most of it as review. For those already familiar with v. 6.0, there is a separate section covering what is new in 6.5.

The initial section gives an overview of PageMaker's capabilities. It describes the various page views, and the fundamentals of graphic/text manipulation. The authors discuss some of the basic layout problems that PageMaker can cure, such as loose or tight lines (letter/word spacing) correcting widows or orphans. (These are unsightly typographical no-nos; a widow is the last word in a sentence, left at the left margin of the page; an orphan occurs when the last few words of a sentence are pushed from the bottom of a column to the top of a new one. Other sources have defined widows and orphans differently, but regardless as to what you call them, they're unprofessional uglies in the world of page layout.) Other aspects of design like leading (the vertical spacing or tightness of lines on the page) are covered later. In any event, PageMaker has the capabilities to correct these often subtle mistakes which can destroy the appearance of a document.

Keyboard commands are quite extensive, allowing the user to select a character, word, line, sentence, paragraph, beginning or end of a story. Hyphenation choices include a half dozen hyphenation schemes. Tables are now handled by a separate application, then imported into your document. PageMaker can mask (cover part of) your objects—either text blocks or graphics. It also can wrap or overwrite text mixed with graphics. Constructing master pages is covered in detail.

PageMaker has an automatic layout adjustment which will transform your document into various formats: Web site, on screen viewing, export to press, or for printing at your own machine. As with many automated versions of practically anything, there are compromises here—but the capability is awfully nice for those of us without major experience in dealing with service bureaus, for example.

Adobe, as owner of Illustrator and Photoshop, is moving to standardize commands. Although these applications perform different functions, many of the commands can be combined. This (along with the mutual use of plug-ins) will ease use of

all three, particularly for those who use more than one of these applications for professional work. Tool palettes are moving towards the same standardization; drag & drop is now possible among the three. Adobe is obviously looking to provide a single suite of applications to cover whatever a designer could want—all with a common set of commands. Some commands can be automated by script, and PageMaker ships with over seventy prefab scripts ready to go.

PageMaker has an automatic layout adjustment which will transform your document into various formats: Web site, on screen viewing, export to press or for printing at your own machine.

Color is something I seldom work with. Since I output to an inkjet, the color cartridge could well have dried up without my being aware of it. In any event, v. 6.5 provides direct control over color output. Different CMS (color management system) versions are built in, affording (hopefully) production color that is exactly what was desired.

Other tools involving color are available. Consider the problem occurring when paper stretches during printing. This results in the ink being printed slightly out of alignment (registration) which could result in either white paper, or blended colors at the border of two. PageMaker allows for "trapping" which is essentially putting a thin blended color line over the line of division. Done correctly this will cover any

problems of registration.

Many other functions are built-in, such as utilizing a "knockout" for printing two colors. An example of this would be attempting to print yellow over a black background. Most printers would not produce a good yellow, with the yellow ink mixing with the black below. PageMaker can "knock out" the black directly under the yellow, resulting in the desired color of yellow.

PageMaker provides specific assistance for producing lengthy documents, although 999 pages is its maximum. Special aids include: table of contents, index, and chapter assistance.

Final exams for PageMaker are design projects near the end of the book. They include a simple newsletter; a two-sided flyer; and a four-sided catalog. Each project is discussed in depth, with detailed instructions on completing it.

Adobe sent my upgrade with only one real manual; nothing like the small bookshelf of manuals which came with Aldus' versions 4.2/5.0. If you use PageMaker at all, I think Macworld's PageMaker 6.5 Bible would be a welcome and useful addition to your library. 

Macworld PageMaker 6.5 Bible, Third Edition, 1997

by William Harrel & Craig Danuloff

636 pages

price: \$40.

IDG Books Worldwide, Inc.

Foster City, California

Chicago, Illinois

Indianapolis, Indiana

Southlake, Texas

Web: <http://www.idgbooks.com>

John Harrold lives in the East Bay, enjoying its superior weather. He is married, with three starving children, due to his enjoyment of "just one more typeface." He enjoys soccer, both playing & watching, big dogs, & Macs.

CyberDog: The Book and the Bust

A Review of Cyberdog: Live Objects On the Internet

by C.R. Clowery

oe Kissell and David McKee have co-authored a book called *CyberDog: Live Objects On the Internet* (MIS Press, New York, 1997) on Apple's late all-in-one Internet program. Both the book and the program are history, done and gone, finished. Does it seem unwise or futile to review a book that we guarantee only a few people ever read, a book that was published in January of 1997 and became obsolete three months later? Let me justify the effort as an exercise in historiography. The value of this review is to chronicle the diminution of humanity that happens when a useful, enlightened vision rises and falls; it is meaningful to record what we lose as the captains of industry, pushed by accountants and stockholders, wield their axes to preserve the bottom line.

We live in fast-moving times. Take the field of computer books: heavy volumes explaining new applications appear and disappear at a meteoric clip, in fact, faster than a comet. Hale-Bopp shone through the entire life span of some technology texts. Hundreds of books containing useful information come and go in a season. We understand this; we harden our hearts and overlook the cost; we accept the waste of paper and precious time.

The interval in time ever narrows between a software program's appearance and the printing of its supporting third-party manual. The book's life relies symbiot-

ically on the program it champions. The book's value lies in clarifying or expanding the vendor's manual, and what's more, it must be available more or less simultaneously with the program. The best ones float and survive; the ordinary tomes sink into remainder bins. Authors gamble that the product they explain will sell; most don't or get updated in six months, and render the old book obsolete. The program's reincarnations usually last a year or two while the outdated versions and their support literature die. It's a fact of the computer market life-cycle.

How ironic that *CyberDog: Live Objects On the Internet* should have been a keeper, among the finest of its kind, and not a throw-away, while Apple management trashed the OpenDoc technology that *CyberDog* was based on. The book is written "buddy" style, à la Click and Clack, the NPR Car-talk radio cut-ups, or Culp and Cosby in *I Spy*. The two authors trade irreverent quips, cheeky insults and bons mots. Plenty of personality emerges: Joe's persona is the mysterious philosopher-iconoclast, David's is the corn-fed straight man. Joe is John Lennon to David's Paul McCartney. Both are computer geeks, mind you, and they present entertaining banter that only occasionally becomes banal, while telling about the program. The breezy, two-guys format is an effective literary device for communicating dry technical data to computer

users with limited concentration spans and low tolerance for tech manuals.

The book introduces OpenDoc, distinguishes its guiding principles, and describes the basics and beyond the basics of *CyberDog*. Let me quote the book's own succinct description:



"CyberDog, Apple's collection of Live Objects for the Internet, has the potential to revolutionize Internet access by breaking huge, unwieldy applications into reusable components that can be assembled to create a tailored suite of Net-ready tools and documents for your Macintosh or Power Mac. CyberDog allows your documents to interact directly with the Internet. Add a stock ticker to a financial summary, write a school paper that links directly to the resources it references, or connect a weather report to live Web updates of a hurricane in motion." (from the back cover, *CyberDog: Live Objects on the Internet*.)

Sound like a great idea? How come we didn't hear about it sooner, you ask? Now that it is over, what was the dream of OpenDoc?

“Instead of having lots of huge applications with a lot of overlap in their features and no easy way to convert between them, let's invent a new model of computing in which documents rather than applications are at the center

OpenDoc's parent organization, CI (Component Integration) Labs, is a non-profit, vendor-neutral industry association formed in 1993 to facilitate the software industry's transition to component software. Key members included Apple and IBM, Novell and Adobe, Lotus and Oracle, and others: the “everyone but Microsoft” club (more on CI Labs below). OpenDoc represented a Better Way than the cumbersome, expensive, monolithic, mediocre mega-app; the worst offender currently squeezing most hard drives: Microsoft Office Suite with its monstrous system requirements. Microsoft wields 50% of the \$5 billion PC-compatible market and 30% of the \$1.2 billion Macintosh software market.

Joe Kissell explained the concept in a nutshell:

“Instead of having lots of huge applications, with a lot of overlap in their features and no easy way to convert between them, let's invent a new model of computing in which documents, rather than applications, are at the center. And instead of huge tools that do everything, we have lots of little tools that each do one particular thing. Then users can buy, install (or download) and use only the ones they need, saving money, disk space and RAM. And they can easily and

cheaply swap out one company's tool for another.”

CI Labs made OpenDoc an “open standard” that any developer could adhere to, allowing their components to be mixed and matched and to work across platforms. Open standards are agreed upon cooperatively, widely published, readily available for licensing, and not tied to any one vendor.

It promised little or no distinction between objects on your local hard drive and objects on the Internet. We could store, view, edit and organize them all on the same interface. Joe and David admit CyberDog's caveats, for example, the slow-as-mud performance on any but high-end PowerPC machines.

Like his earlier book on NisusWriter, *The Nisus Way*, Joe includes chapters on imaginative and stimulating uses of the software.

In chapters six, seven, and eight, “CyberDog at Home”, “CyberDog in Business”, and “CyberDog at School”, Joe shows creative ways to unleash CyberDog. We learn the fun parts, how CyberDog can fetch, browse, bark, do tricks, and become your best companion on the Internet.

The book was informative and skillfully presented, despite sporting a lunging, green and purple, 3-D Weimaraner on what may be one of the ugliest book covers I've seen.



Uglier still is a Japanese book cover version's, truly a hound from Hell.

OpenDoc and CyberDog came bundled with my Nisus 5.0.3 upgrade. I installed



OpenDoc and CyberDog and it performed, although it was resource hungry and bombed every ten minutes. I would have to get used to its conventions but I immediately saw the potential of Live Objects to revolutionize the way we think of integrating work and the computer desktop.

Yet Apple put CyberDog to sleep. An ironic postscript to their book: Joe and David speculated on the future of OpenDoc and CyberDog. I mention their busted prediction not to gloat at the inaccuracy, rather to underscore the tragedy and the loss when selfish corporate greed overcomes idealism and the search for a Better Way to work.

Could there have been CyberDog for Windows? Could we have worked in harmony across platforms at last? Imagine a common technology for secretaries, executives, artists, students, salespersons, and home users, building documents. A fascinating speculation. OpenDoc could have made possible sharing of Macintosh Live Objects with a Windows version of CyberDog that behaved and looked exactly like the Mac version and required no translation between documents, folders and objects.

Microsoft was not behind the barn door when Apple and IBM cooperated to pioneer component technology. OLE and ActiveX are just that; even closer to home will be the next version of Internet Explorer from Microsoft which may in fact tie the personal computer's desktop to the Internet.

Joe's testimony, from page 269 of *CyberDog: Live Objects On the Internet*:

“For right now, we'll level with you. CyberDog is far from perfect and we still

...Cyberdog is a very young technology, it's made major strides in a very short period of time. At this rate, it won't be long until it overtakes the likes of Netscape and EMailer in terms of power, speed, and convenience—

small step in the right direction, away from separateness and individuality gone awry, the profitable alienation that the post-modern marketplace capitalizes on.

Apple initiated the project, retreated from its commitment, and *c'est la guerre*, life is tough and who cares? Joe and Dave's CyberDog: Live Objects On the Internet communicates a vision. The death of CyberDog stands as a milestone on the downhill road. Perhaps its significance is in its passing, so that historians can chart our descent by small events. 

C.R. Clowery writes software reviews for *BMUG* and for the *Washington (DC) Apple Pi* newsletter.

find ourselves going back to conventional Internet applications for many things. At the same time CyberDog is a very young technology, it's made major strides in a very short period of time. At this rate, it won't be long until it overtakes the likes of Netscape and EMailer in terms of power, speed, and convenience—and when it does, we'll be only too happy to give up our old tools for good.

“We're no longer worried that OpenDoc will go the way of PowerTalk (remember that?)—we think it will be more like the Newton: off to a rough start, perhaps, but with many enthusiastic followers and a couple years of solid improvements, it will really come into its own.”

Joe's book now commemorates a deeper value that CyberDog delivered. CyberDog and its host, OpenDoc, were a saving vision, a remedy for an ill. They were an answer to the problem of insane application bloat, and the forces of selfishness and greed that want to place a monstrous office suite on every hard drive. CyberDog opened up the Macintosh desktop into the world of the Internet, a holistic concept that like OpenDoc, let people share their tools and work together. The motivating idea of OpenDoc supplied a rare opportunity for harmony and community: it advanced a

From Movies to Media

Retooling Terran Interactive's Digital Compression Program

by Dennis R. Dimick

Movie Cleaner Pro became an immediate hit when it arrived on scene in late 1995. Designed for compressing QuickTime movies, this capable and simple-to-use program from Terran Interactive finally made short work of creating good-looking movies that played smoothly from CD-ROM.

Now, as the World Wide Web has become the digital delivery medium of choice, Movie Cleaner's trainers have retooled it into a smoothly-integrated Web movie-making tool and rechristened it Media Cleaner Pro 2.0. The program also offers configuration options to allow compression for the newly emergent digital video disk (DVD-ROM.)

Despite added abilities, Media Cleaner carries forward its predecessor's ease-of-use. Based on my experience with late pre-release software, this revision should easily become as important for video and audio Web-content producers as Movie Cleaner became for QuickTime-based CD-ROM compression.

Garbage In, Garbage Out

That said, today's World Wide Web isn't well-suited to quality video delivery. In the realm of "you can't get a silk purse from a sow's ear", no amount of highly-optimized data compression can create fine-looking "streaming" video or concert-quality audio played over dial-up modem connections. At least with the current state of consumer telephone networks.

Even with high-speed ISDN or T-1 line access, Web-delivered video in no way compares to what has been possible for years on CD-ROM or from the high-quality digital video capture and tape output cards available for the Mac.

But if you're in business to create digital

video and audio for Web delivery, Media Cleaner Pro offers a great set of tools to produce optimized files in several formats. Despite Cleaner's move towards Web media compression, Terran Interactive has preserved and enhanced the abilities that made the original program indispensable for CD-ROM movie makers.

Making Movies Better

Media Cleaner could be termed a post-production tool. It's designed to optimize playback behavior of existing movie and audio files delivered in low-data rate environments like the World Wide Web and CD-ROM.

It's not a movie creation tool in the sense of a QuickTime editing program such as Adobe Premiere, After Effects or Radius Edit. If you plan to make a QuickTime movie combining video, audio, graphics, pictures and text, use Premiere or another editing program.

Once you've created and saved a QuickTime movie file using a codecs such as Animation, use Media Cleaner to prepare the file for Web or CD-ROM delivery using RealMedia, Cinepak or other appropriate compression.

Cleaner is designed to reduce file size, smooth and lower the "data rate", and put your movie into a format and file type that works properly when played over disk-based or network connections.

"Data rate" is number of kilobytes (KB) per second transferred as a movie plays continuously from disk or over a Web connection. For example, a

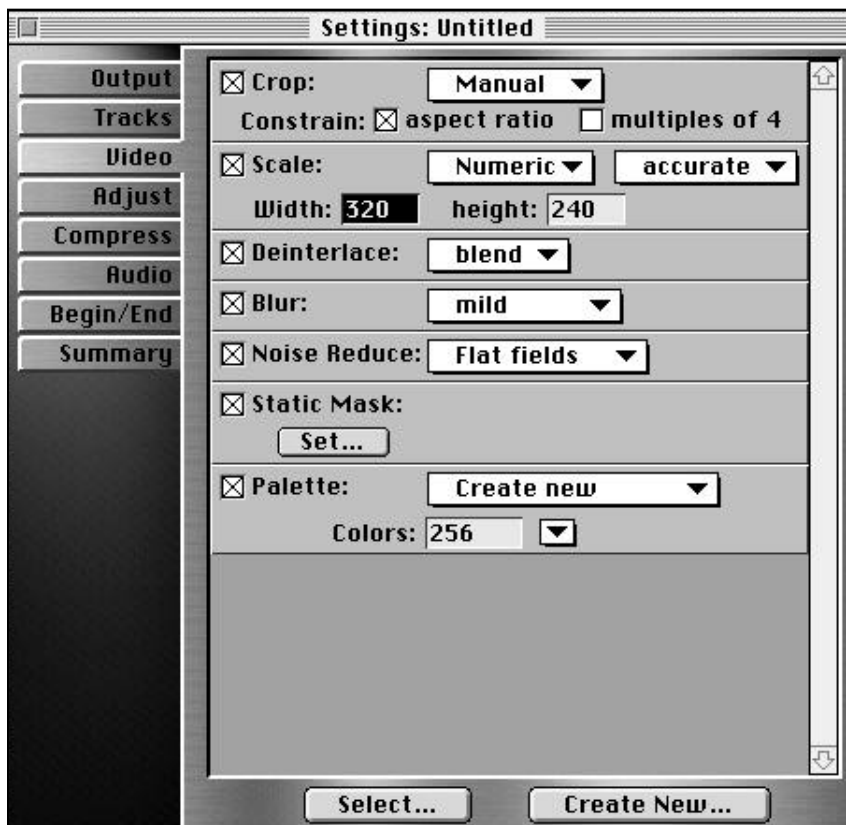
movie that plays continuously via a 28.8 modem will need to have a rate of about 2.5 KB per second or less. A movie that plays smoothly from a 2X CD-ROM on a high-end Mac will need to have data rate of about 250KB per second or less.

New Cleaner Talents

Last year Terran released a Movie Cleaner "Web-Motion" plug-in designed to compress movies for Web delivery. Web-Motion's interface was a bit unwieldy, giving the feeling something had been bolted on to Movie Cleaner. Despite this, Web-Motion offered incomparable performance for creating low-data-rate movies, as even Adobe's CD-ROM Movie Maker Plug-In for Premiere 4.2 couldn't compress movies small enough for Web delivery.

In the new Media Cleaner 2.0, Terran Interactive has smoothly integrated talents offered by Web-Motion into a new tabbed-settings interface that keeps track of various





movie parameters. The customization and movie configuration options Media Cleaner 2.0 now offers for compression are so many it's hard to comprehend.

Wizard of Settings and Adjustment

What the program also offers, and what makes it easy for anyone to use, is its nifty "Media Cleaner Wizard." This is a built-in interview process linked to program settings that asks what medium you plan to deliver your movie on, and how good you want your movie or file to look or sound. Based on interview responses, Media Cleaner sets parameters for output. It's a foolproof process that creates fine-looking and sounding files with just a few setup clicks.

A sidebar adjacent contains a listing of the many configuration options available via Media Cleaner. Possible options are listed according to major subject choices Media Cleaner offers through its tabbed interface.

Most options are just that, and only those who need the many customizations would even notice they exist. This is as much compliment to Terran's subtle and functional interface design efforts as anything.

Making a Movie

Compressing movies via Media Cleaner can be as simple or as complicated as you

want. You can simply open an existing movie into Media Cleaner, and a "Wizard" interview window will appear asking whether your destination medium is CD-ROM, WWW, DVD-ROM, or kiosk/presentation from hard drive. It will also ask whether you plan to play your creation on powerful or less so Macintosh or Windows computers or both. You'll be asked if you plan to compress for CD-ROM, and the speed of the destination drives, e.g., 1x, 2x, 4x or faster.

If you plan to compress for Web delivery, you can select QuickTime, RealMedia or VDOlive as format options, and whether delivery will occur via 14.4 or 28.8 modem, ISDN, T-1 or cable modem, or Intranet.

The list goes on. You can either let Media Cleaner's "Wizard" set all the compression options, or you can override them for a custom look or sound. Media Cleaner is also designed to compress just audio files such as RealAudio, AIFF and QuickTime audio.

A new variable batch-processing option allows you to set up a variety of compression parameters and apply them to successive compressions of the same or different file. The batch option is great for trying several options on one movie and letting your Mac automatically execute your choices. You

Output

Format: QuickTime, RealMedia, VDO, AIFF and RealAudio; choice of adding file name suffix such as .mov; flatten and make cross-platform; fast start for WWW playback; customized movie information such as name and copyright; create HTML information, auto-start, looping and show movie controller.

Tracks

Flatten only; copy or process video and audio; copy or burn text, sprites or 3D; copy MIDI; copy timecode; and copy or burn additional track types.

Video

Manual or numeric cropping, and constrain aspect ratio to multiples of four pixels; scale source movie to new destination size using fast, normal or accurate methods; de-interlace video fields by blending or choosing odd or even fields; mild, moderate or extreme blur; noise reduction by removing stray pixels or flattening color variations before or after scaling; adding a static mask to exclude parts of the window from video options; creation of custom color palettes such as those for Mac OS, Netscape default, Windows 95 or 3.1.

Adjustments

Gamma, brightness, contrast, black restore, white restore, hue and saturation. (Previously options such as these were available only in editing programs such as Premiere.)

Compress

Codec: options vary based on QuickTime, VDO or RealMedia output. Besides QuickTime, Cleaner comes with RealMedia and VDO. Apple's QuickTime offers software-based codecs such as Cinepak, Animation, Photo-JPEG, Graphics, M-JPEG A and B and Video. Other third-party codecs such as Power Video and Clear Video can be purchased.

Color bit-depth, e.g., 256 to millions; spatial and temporal quality sliders; frame rate-per-second, maintain long frame option (good for still photos); key frame selections of none, all, or every x frames; data-rate control to set maximum kilobits or kilobytes per second, with sub-options including "stretch frame" if data rate exceeded.

Audio

Choices based on QuickTime or RealMedia, QuickTime offers IMA 4:1 compression, RealMedia offers alternates from 6.5 Kbps to 80 Kbps music stereo. QuickTime audio also includes options for 8- or 16-bit depth, frequencies ranging from 4.0 to 44.1 KHz; mono or stereo and volume adjustment.

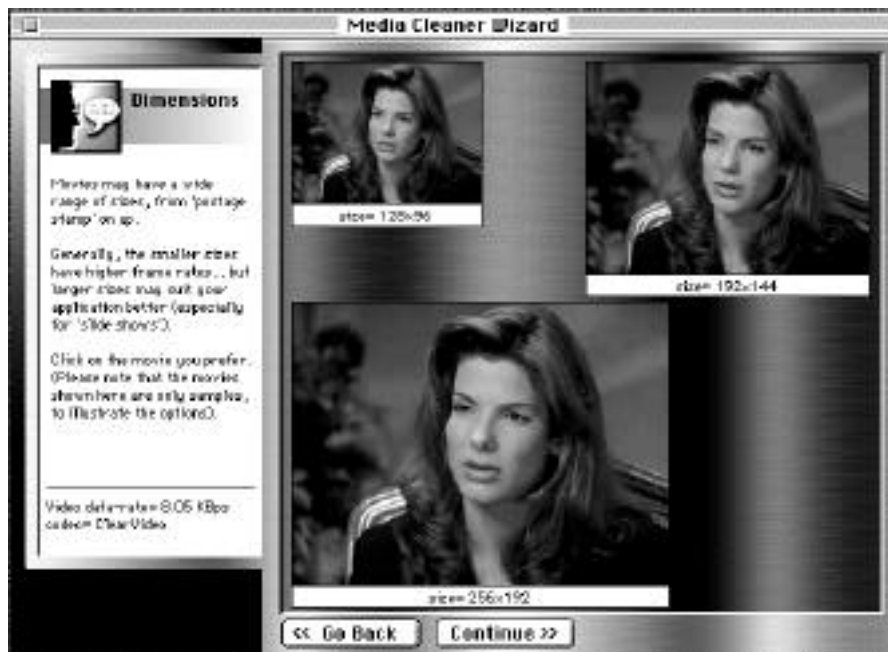
Begin/End

Offers choices to fade video in or out; fading audio in and out; hold first and/or last frame; set high-quality first and last frames.

Summary

Media Cleaner offers a summary screen showing all settings. In the move from QuickTime-based compression to Web-based, options for compression have expanded almost exponentially.

Media Cleaner has moved to support the expanding choices, but has also retained simplicity of setup and use. The summary choices page is one example of this



come back later to see which resulting file best meets your needs.

The program also comes with a CD-ROM that shows what your movie will look like. A slew of sample movies have been compressed to the ROM and will play back for you in the "Wizard" windows during setup phase, to help you see what your creations will look like in final compressed form.

Putting it Together

For those of you whose work or avocation involves creation and delivery of QuickTime, RealMedia or other digital format movies and files, Terran Interactive's Media Cleaner Pro offers an impressive array of tools.

It's not a program for just anyone who dabbles in QuickTime movie-making, but if you're looking for the best playback performance in a variety of delivery formats, Media Cleaner is the way to go. Designed to find the elusive balance among opposing forces of smallest file size, smoothest playback, and highest quality image and audio, Movie Cleaner Pro makes it easy to compress digital movies that work right.

Beyond Media Cleaner Pro, Terran Interactive offers one of the most informative Web sites going if you're looking for clear and useful information on how to create and compress quality digital video and audio. A limited version of their program is also available for downloading and use. 🐱

Media Cleaner Pro 2.0

For Power PC and 680x0 Macs
Terran Interactive
2 North First Street
San Jose, CA 95113
Orders Phone (800) 577-3443
<http://www.terran-int.com>
Street price about \$350.

Dennis Dimick of Arlington, VA has written for several years on QuickTime and graphics-related topics for *The BMUG Newsletter*. He bought *Movie Cleaner Pro* in its first iteration when it was hailed as a replacement for Apple's *MovieShop*, a lovely but just another poorly supported tool from Apple Computer, Inc. Dennis can be reached via email at: ddimick@aol.com ©1997

Eye Candy

by Bruce Linde

I'm not really an artist, but I get to play one thanks to Alien Skin's Eye Candy plug-ins for Photoshop (and applications that support Photoshop plug-ins).

Eye Candy is Alien Skin's new version of their previous Black Box 2.0 plug-in collection, which lets yutzes like me add drop shadows, carve out letters to make them look 3D, apply looking-through-antique-glass refraction effects ... and save favorite settings. Not only was it my indispensable Swiss army knife Photoshop utility, it never broke. I never once in a year of banging on The Black Box saw it crash or get weird.

Eye Candy is the latest incarnation of The Black Box, adding 11 new filters, 200 presets, support for Photoshop Actions (Photoshop's version of macros/scripting), a 3D lighting control, and zoomable pre-



Figure 1. Eye Candy's Carve Filter. Note the zoomable preview, the resizeable window, the 3D lighting, and the ability to save (or load) your settings.

Eye Candy is a rock-solid
incredibly versatile set of
filters that will constantly
inspire your creativity.

view windows. Filters included are:

1. Antimatter—inverts brightness with out affecting hue or saturation.
2. Carve—gives a carved or chiseled look (although I still see it as coming out, rather than going in ... an optical illusion remnant of the 60s, no doubt!)
3. Chrome—cool metallic effects (and warm ones, too!)
4. Cutout—leaves a hole with a drop shadow underneath for striking effect.
5. Drop Shadow—you can set distance, opacity, blur, and the color of the shadow. You can also have the filter 'Draw Everywhere,' which means that you can put the full shadow on a separate layer, should you want to adjust it later.
6. Fire—when Morgan and I did the last Newsletter cover we set the Newsletter back issues on fire by making a layer of red, a layer of yellow, blur ring them, using the Smudge tool to flame out the edges, etc. Eye Candy's Fire even lets you control how much of the flames appear in front of your selection or behind it.
7. Fur—remember when you were doing that brochure for Ian's House of Poodle? Wouldn't this have been the perfect tool for the job?
8. Glass—actually, when I first typed the name of this filter I typed 'Class'...which this one can easily add. Going nuts on the Refraction settings can yield some amazing effects.
9. Glow—in addition to the more obvious uses for this filter, you can also use it to increase the readability of type by putting a very small bordering glow around text that's sitting on top of a busy background.
10. HSB Noise—variable Hue, Saturation, Brightness, and Transparency for controllable noise. Great for creating tiling background gifs for Web pages.
11. Inner Bevel—adds an embossed look inside your selection.

12. Outer Bevel—adds an embossed look outside your selection ... instant Dymo labels!

13. Jiggle—before this filter you would have had to sit in front of your computer for 20 hours straight to get this effect from your tired eyes. It actually uses random bubbling to produce gelatinous (mild) to shattered (max) effects.

14. Motion Trail—similar to Photoshop's built-in filter, but more control, and your settings are saveable (without having to create or locate an Action).

15. Perspective Shadow—simplifies the process of creating perspective to one or two clicks.

16. Smoke—hey, where there's Fire, there's Smoke!

17. Squint—Similar to Jiggle (in a way), but more Blur-ry. Very smooth.

18. Star—kind of the odd one of the set, but very useful. I say odd because it's more of an object creator than an object modifier. Creates polygonal shapes without having to go to Illustrator, etc.

19. Swirl—Controlled whirlpools yield instant Impressionism. Using Swirl on type (and cranking the settings) can yield excellent distressed type effects.

20. Water Drops—Need to make that beer ad look truly realistic?

21. Weave—no need to go looking for one of those 24-hour Rattan places when you've got this baby!

Eye Candy is a rock-solid, incredibly versatile set of filters that will constantly inspire your creativity. Jeff and the rest of the Alien Skin gang are the kind of programmers (and company) that make you proud to be a Mac person. They also have the right attitude. Their copyright notices include the phrase, "We'll never wear suits!" and credits for "Screaming," "Kicking," "Biting," etc.

Eye Candy comes on a single floppy disk, and is, in my book, mandatory for any-



Figure 2. The Cutout Filter reveals the layer underneath, which, for some reason, had both the Carve and Weave filters applied. There's a Glow around the whole thing. Kids, don't try this at home ... we ARE professionals!

one who enjoys playing around in Photoshop. Minimum machine recommended is a PowerPC with System 7.1.2 or greater, 12 megs of RAM, and Photoshop 3.04 or greater. The minimum recommended Windows version (if you have to because of work, of course!) is a 486/DX, Windows 3.11 running Win32s with OLE version 1.2 or later (aren't computers easy?), 10 megs of RAM, etc. 

*bruce linde thinks
BMUG memberships
make the perfect gift!
he cohosts BMUG's
Thursday night Main
Meetings, serves as
a member of BMUG's
Board of Directors, and
is one of BMUG's
webmasters.*



Figure 3. Jeff Butterworth, Alien Skin President. Note the use of the Water Drops filter. Shark optional.

Eye Candy 3.0
Alien Skin Software
<http://www.alienskin.com>

Photoshop Instant Expert Review

by Aubie Schmidt

E After crossing my fingers and toes and praying desperately that my raffle ticket would be called, I was the proud winner of Adobe Photoshop 4.0. As Bruce Linde announced to the main meeting, "All right, now we have one really happy member, and fifty angry ones," I walked away with my program. Photoshop is one of those universal applications that everyone kinda could use at some time or another in some form (boy was that vague!). My experience with it had been basically as a graphics file converter for gifs and jpegs on my Web Page. Aside from the standard painting tool familiarity due to using SuperPaint 1.0 on my stepbrother's Mac Plus six years ago, and knowing how to switch from RGB to Indexed color, Photoshop was a big untapped utility that I hadn't yet mastered.

Considering that I won Photoshop from BMUG, I thought I'd give a little back by reviewing Macworld Photoshop 4 Instant Expert for the newsletter, and learn a bit about this program that is no longer illegally residing on my computer. The book promises to be a collection of 18 "completable in an hour" lessons that will take you from knowing as little as the Macintosh Basics to serviceable photo editing ability, and even being able to put "Photoshop Guru" on your resume with reasonable lack of fibbing.

I eagerly cracked the cover, whipped out the included CD-ROM, which handily has graphics files of every screenshot as well as some clipart and example files of the work you do in each lesson. If you get stuck (you inevitably will) you can check the CD, look at the files and hopefully work your way through the problem. You can look at the next graphic example and compare it to yours, working backwards to achieve the goal the book wants you achieve.



This helped me out in a few cases when I did get stuck. Sometimes I would call a friend over and have him explain something, and sometimes we would agree that the book was wrong. There were times when I would follow instructions verbatim and still could not figure out how they did certain things, occasionally concluding that they left out a step. In one case, the book instructs you to have the Resample Image



box unchecked when resizing an image. I attempted to resize with this option open yet was unable to resize my graphic as the book intends. When you resample, you lose data, which is probably why the book doesn't want you to have the option checked, yet it does not work the way it explains it, and they do not offer alternatives.

Other times, the book asks you to select a Menu Item that doesn't exist. I could always deduce which item they intended for



me to select, but that still leaves the sour taste that someone didn't fully edit the book before it went to press. More evidence to this effect: It told me to press -B to get the Brightness Contrast Adjustments, which is a Photoshop 3.0 feature they removed in 4.0.

These knocks aside, the real fun of the book is learning. What I came to realize after dealing with all the errors in Photoshop Instant Expert was that what makes a good Photoshop user is one who is able to let go of all inhibitions and who has time to just munge with the tools. Once you get familiar with the abilities that Photoshop provides you with, go crazy! Go nuts! Have fun and play. Having a set idea of what your image should look like invariably ruins the mood of the work session, as you can often get good stuff by trying different things instead of being particular. Being a guru would mean that you could attain a certain intended image, going from what you have to what you want, but anyone with less ability than that should be open to the idea that what you wanted isn't necessarily the only thing that can look good. This book did encourage me to explore the program and to ignore its own settings. It's so rational: use this setting for this reason so we get this result. No! I'm going to go extreme, use 70 when it's telling me to use 5, see what the tools do, I can be subtle when I have a client waiting, but I'm playing with the graphics capabilities of my new 604 Processor and a brand new copy of Photoshop, I'm going to have fun with my images.

The book is serviceable enough in familiarizing you with the Photoshop environment, but I couldn't really recommend it to other users considering how much trouble I had with it. It often explains multiple ways of accomplishing a task, which is helpful, and is pretty clear about tool and feature use, but I can't overlook the errors. In most cases they are simple mistakes, in others they

are serious oversights, and in either instance, they aren't worth fighting through.

The techniques you acquire in cleaning up images and making them more presentable are really valuable. The book is realistic in its assumption that anyone could run into a client who hands you a really bad stock graphic file to work with, expecting you to clean it up and turn it into the next

This book did encourage me to explore the program and to ignore its own settings. It's so rational: use this setting for this reason so we get this result

sweeping Ad Campaign to run over our television sets, thus has its worth. I'd say that unless you're fairly familiar with Photoshop already, don't risk it. If you are, take a look at the lessons Instant Expert offers, and if they are something you are interested in, go ahead and pick up a copy, but know there are better things out there.

The first picture is a sample washed-out stock photo. By following the book's guidelines you can turn it into a clear, detailed graphic, as the second picture. You can see the texture that hides inside the original, and you can make the graphic very real. Picture three is the result of my playing with it, getting one of those contrasty speckled images that annoy me so much in Wired Magazine by futzing with the same guidelines which produced the second photo, but having a little more fun. 🐘

Aubie is a Systems Admin. Assistant at Pixar Animation Studios. He is a full time Berkeley Student and complete psycho, but you'd only know that if you watched him jump off the Zellerbach Balcony. He enjoys over extending himself, working three jobs, redheads and making up excuses. He also likes to chat when on The Planet.

Operating System Versions

author unknown

The intent was to find out how much of the computer's resources would be needed by several versions of the Mac OS for a particular computer.

The hardware is a Mac Portable, with a 68000 CPU running at 16 MHz, 4 megs of RAM, and a 40 meg hard drive, and a StyleWriter I inkjet printer: seven years old, yet a tidy system, taking up little space on the desk and yet capable of 300 dpi printed output, as well as of being taken to the library for note-taking and running for quite a while on the internal battery. The backlit display is clear and easy to use, although displaying "1-bit" black and white video. Also, it is an inexpensive setup, valued at only \$200 total by the United Computer Exchange as of March 1997.

Although the 68000 CPU will not run the latest version 7.6 of the Mac OS, it will run the immediately previous version 7.5.5 (7.5 Update 3.0), or version 6.0.4 at the earliest. Three versions were tried: Version 6.0.7, Version 7.1 Update 3, and Version 7.5 Update 3. For each version, the "Easy Install" method was used, followed by a simple culling of unneeded items, such as the Map cdev, and other cdevs and INITs that didn't work on that model. [Note that cdevs become "control panels" and INITs become "extensions" in System 7 and above.—Editor] The hard disk was reformatted before each installation with SCSI Setup version 7.3.5.

Version 6.0.7 took up only 1.3 megs of space on disk. It booted up in only 4 seconds from the "Happy Mac" symbol, and used up only 170k of RAM, leaving 3.9

megs of RAM available for applications (running in the regular Finder, not the MultiFinder).

Version 7.1 took up 3.4 megs of space on disk. It took 22 seconds to boot from the "Happy Mac" symbol, and used up 1 meg of RAM, leaving 3 megs of RAM available for applications.

Version 7.5 took up 14.4 megs of space on disk. It took 50 seconds to boot from the "Happy Mac" symbol, and used up 1.5 megs of RAM, leaving 2.5 megs for applications.

It would appear that System 7.5 is unnecessarily burdensome for a 68000 4/40 setup. Ten times the disk space and boot time was needed, for no apparent gain in a single-computer system unattached to a network, with considerable loss in available RAM.

Either System 7.1 or System 6 were reasonable choices. System 7.1 has a modern user interface with multiprocessing capability and simple font management. System 6 left much more RAM and disk space available for applications. TrueType fonts are available for either one, as are Shareware add-ons such as SuperClock and MenuChoice. MacWrite Pro, MacDraw Pro, FileMaker Pro v.2, ClarisWorks v.3, MS Word v.5.1 and Excel v.4 will work on either System 6 or System 7.1. For writing papers illustrated with line drawings, or for accounting, such a setup would appear to be more than adequate for almost all students. 🐘

Adobe Acrobat as a Research Tool

Creating Searchable Databases from World Wide Web Pages

by Dennis R. Dimick

A few years ago Adobe Systems created a new type of publishing tool called Acrobat. The name is appropriate, for Acrobat offers many tricks. But unlike other Adobe programs like Photoshop, Illustrator, and PageMaker, Acrobat has been a bit slow to catch on—perhaps because its purpose is not well understood.

You don't use Acrobat for creating content in the same way you might use an imaging, drawing, or layout program. If you use Photoshop and PageMaker to create an illustrated brochure, you use Acrobat to convert the PageMaker file into a "Portable Document Format" or PDF file.



Based on Adobe's Postscript page-description language, these PDF cross-platform format files can be opened and viewed directly, without translation, on Macintosh, Windows, and several types of UNIX computers using Adobe's free Acrobat Reader program. All graphics and text formatting remain intact and in original position.

Adobe has positioned Acrobat as a tool for creating and distributing high-quality formatted electronic documents that can be

shared among all major desktop computer platforms. This is true, but I've also found that Acrobat is a useful tool for creating searchable databases of information gleaned from the World Wide Web.

Some Acrobat Background

Adobe finally released Acrobat 3.0 in late 1996, after months of pre-release hype, long after the Windows version released. The basic package now includes components previously reserved for an earlier and more expensive "Acrobat Pro" 2.1 offering. The Acrobat 3 package now includes:

1. PDF Writer—a Chooser-level selectable "Printer" driver for creating PDF files from any Macintosh program that supports printing.
2. Catalog—A full-text indexing program for creating searchable archives of existing PDF files.
3. Exchange—A PDF file-merging and editing program with features for creating bookmarks, thumbnails, links between PDF pages and documents, and for creating links to Web sites via URL embedding.
4. Reader—A freely distributable program for reading and searching PDF files. Acrobat Reader is also available free for downloading from Adobe's Web site.
5. Distiller—A tool to create PDF files from documents containing Postscript content (such as Illustrator, PageMaker, and QuarkXPress files). Distiller is optimized for compression and creation of PDF documents containing EPS, TIFF, and other high-resolution graphics content.
6. The Acrobat package also contains Adobe Type Manager 4.0, extensive

online documentation, 14 Adobe Postscript fonts, and an installation and new features booklet.

Offering Universal Appeal

What is the Acrobat appeal? You can use any program that supports printing (e.g., SimpleText, QuarkXPress, and Netscape Navigator) to create PDF documents for others. They don't need the program you used to create the document, nor do they need file translation tools like Claris XTND or DataViz MacLink.

The included Acrobat Reader and Acrobat Exchange allow you to open, read, copy, paste, search and print any Acrobat document, and they allow you to copy text and graphics to place them into, for example, Microsoft Word documents. If you choose, Acrobat offers security features via the Exchange editing program to prevent copying from, changing, or printing PDF documents you create.

Catalog and PDF Writer's Tricks

I'll focus on PDF Writer and Acrobat Catalog. These Acrobat components have allowed me to create indexed, searchable databases of topical information from the World Wide Web. In reality, you can do this with any set of documents you create on the Mac, not just pages from the Web.

It's just that in the case of the World Wide Web, PDF Writer allows you to save Web pages visually intact with searchable, catalogable text, and with graphics in place. Acrobat Catalog creates the searchable indexes, and Acrobat Reader and Exchange are used to search the indexes and view the documents.

Amassing Pages of Information

I've been working on several projects

lately that require gathering recent information from many unrelated sources, often US government or international organization Web sites such as those from the United Nations. Topics have dealt with world food supply, global population dynamics and migration, boreal forests, western grazing, and the American wilderness system. All have lent themselves to Acrobat database creation as many Web sites on these subjects already contain PDF files that I could download and integrate into databases with other Web-based information.

With Web browsers such as Netscape



Navigator (mostly) and Microsoft's Internet Explorer (or the MSIE browser module in AOL's 3.0 program), I've been able to print any Web page to an Acrobat file using PDF Writer. Adobe also supplies a Control Panel "PDF Writer Shortcut" that allows you to print to PDF even if you have another printer selected in the Chooser. You hold down the Command key while selecting Print from the File menu, and PDF Writer overrides your selected printer for this one action.

Depending on the host application, PDF Writer also allows you to add header and footer information to each PDF file created. From Netscape you can specify Location (URL), Date, Page Number, and Title. This can be invaluable for searching PDF documents by creation date or URL.

Not Always a Perfect Print

There are caveats. When you use PDF Writer to print to PDF any Web page containing active links, the links will not be active in the resulting PDF file, and the underlying URL is not accessible. Acrobat does allow you to later embed URLs in any Acrobat file, so it is possible to make links live, but this is time-consuming and beyond the scope of my research intent. On the other hand, if any PDF file contains

Postscript art with text, such as that from Illustrator, this text is searchable and catalogable under Acrobat.

Any page you try to print to PDF that has a black background and white text will not look good. PDF Writer allows you to select an option to "Include Background," but I've never successfully been able to capture colored backgrounds from Web pages. It's best in this case to save a page's text as a text file and then print that to an indexable PDF file from PDF Writer.

Be sure the width of your Web browser window isn't wider than a normal letter-sized (8-1/2 by 11 inch) sheet of paper. PDF Writer allows you to print PDF pages at various percentages of original size, and I've typically set this option to 90 percent.

This insures all text at the right of the source Web page is in the PDF "page," and does not run off the right side of the "printed" Acrobat file. Sometimes this isn't possible, as lots of Web designers create "wide" pages. You can always reduce page percentage size in the page setup dialog box, or you can print pages in landscape mode.

Cataloging and Searching PDF

I'll set up folders for different subjects and print to PDF all related topic files and Web pages into each folder. Once my data gathering is complete, or is at least at a point where I want to start analyzing information at hand, I'll use a component of Acrobat 3.0 called Catalog.

Catalog creates a full-text index of all Acrobat files in a folder. All you have to do is drag a folder of PDF files on top of the Catalog application icon (or an alias of it), and Catalog will create an index that you can search much in the same way you would use search terms in Internet search engines like Yahoo or AltaVista.

Once the catalog is created, you can use the search function within Reader and Exchange to look for any term or string of terms in the documents you have captured to PDF. It's possible to search several separate PDF indexes at the same time.

You can customize the search based on things like wild-card characters, word-stemming that looks for words with similar roots, case-matching, Boolean searches using AND and OR, and thesaurus searches that look for words with similar meaning.

Skimming the Highlights

Suffice it to say this only offers a taste of some Acrobat tricks available by combining PDF Writer and Acrobat Catalog to gather and index information. The other Acrobat components, Distiller and Exchange, offer vast options for creating, editing, and distribution of electronic documents, and they are worth articles of their own. Acrobat Reader and Acrobat Exchange offer similar document searching options, but Exchange is powerful as a document editing, linking, and merging program.

Another component, Acrobat Capture, is a promised but not yet shipping part of the Acrobat package that will allow you to scan existing paper documents into searchable, catalogable archives of PDF. (Alas, Acrobat Capture is shipping for Windows, but not yet for the Macintosh. A beta version of the Capture Plug-In for the Mac was posted on Adobe's Web site in April.)

Adobe Acrobat comes on a CD-ROM, and most documentation is electronic. On one hand this is good, as Acrobat's documentation comes as searchable PDF files. But if you are a paper manual fan, all you will get is a small booklet to help with installation and setup.

Adobe Acrobat 3.0

Minimum System Requirements

Requires a Macintosh with 68020 processor or better. Recommended setup is a Power Macintosh with 16 megs of RAM available to Acrobat components, System 7.1.2 or later, a CD-ROM drive and 40 megs of hard drive space. Floppy disks available for a price, on request.

Street price: about \$190, upgrade from Acrobat Exchange 2.1 is about \$80. 

Dennis Dimick of Arlington, VA has written for the BMUG Newsletter on a variety of subjects the past five years. He is a fan of Apple's QuickTime technology, and also works as a magazine editor. Acrobat has proved quite useful for his magazine work. Dennis can be reached via email at ddimick@aol.com

Web Site: <http://www.adobe.com>
Adobe Systems, Inc.
 345 Park Avenue
 San Jose, CA 95110-2704

© 1997 Dennis Dimick

ATI Xclaim VR Video Card

Video for the Rest of Us

by David Scott

Do you remember, like I do, going to a computer show and playing with some demo of a system that put a little live video window on the computer screen? Do you remember dragging the window around on the screen, just like any other window, and being amazed by the fact inside the window was really live, moving video, and you could put it anywhere you wanted? And then, did you get the silly idea to try resizing the window, making it really thin in one direction, knowing all along that the video would of course not be squeezed ... but it was!

How fun! How exciting! How expensive! In fact, like me, you probably didn't even check into the price, because it was obviously more of that "professional" stuff that nobody could afford just to play with at home.

Or perhaps you have longed for an AV Mac, but could not justify the upgrade to a new machine. Maybe you have a 7500 or 7600, which is only half an AV Mac, because it has video in, but no video out. Or maybe, like me, even though you never got into playing arcade games on your computer, you happen to have a gigantic television set sitting in the living room, and you keep thinking: "Gee, if I just had a way to display my Mac screen on the TV, and one of those game joysticks, and a really long ADB cable so I could put the keyboard and joystick in front of the TV, what a blast it would be to have friends over for a computer game shootout party!"

Well, my friend, the day has come. The Xclaim VR video card, from ATI Technologies, lets you do all this and more. Adding it to a less expensive PCI Mac gives you the hardware capabilities of an Apple

The ATI Xclaim is a
computer display card
that can also do standard
video in and out

8500 or 8600, for much less money. (However, as we shall see, there are some problems.)

Five Cards in One

ATI advertises the VR as five products in one:

- QuickDraw accelerator
- QuickDraw 3D accelerator
- QuickTime playback accelerator
- QuickTime capture engine
- Mac2TV video out

The terminology can be confusing. QuickDraw is Apple's imaging system, used to draw text and pictures on your screen, and on paper using a printer. Another imaging system we often use for printing is PostScript. When you see a product advertised as a "QuickDraw accelerator," you might assume it is something you stick into your computer to make the display run faster, and it is. The confusing part is that it might also be a whole new display card, as it is in the case of the Xclaim VR. If your Mac already has built-in video, as almost all do, the Xclaim card gives you a second video port. If you have two monitors, you can attach one to each port, and voilà, you have a two-headed computer.

This capability is one of the biggest advantages of a Mac over Windows PCs, but a lot of people still don't realize it. A lot of office workers might be more productive if they had two monitors, since it gives you so much more screen space. Even two 14-inch monitors can be very helpful, as it gives you an inexpensive way to see two documents at once.

I purchased the Xclaim VR primarily because I work as a programmer and was already accustomed to using two screens on my previous Mac, a IIci. I paid \$300 a couple of years ago for a NuBus display card that just gave me a second monitor port. When I needed a PCI card for my new PowerCenter, I was excited to find the VR for almost the same price but with all the extra fun stuff too. You can buy a 2-megabyte version of the card for less, but the difference in price for the full 4-meg version was only about \$60, so I felt it was well worth it.

A final confusion arises over the term "video." Before our Macs could do any NTSC video in and out, we unfortunately got accustomed to calling the computer display card a "video card." Now we're in trouble, so I'll try to keep things clear. The main point to keep in mind is that the ATI Xclaim is a computer display card that can also do standard video in and out. Also be aware that ATI makes other products called Xclaim GA and Xclaim 3D, which are different.

What You Get

The VR is the small, 7-inch PCI card, and it has connectors for an Apple monitor, composite video input, S-video input, and one they call TV Out. There wasn't room for both the composite and S-video out connectors, so

they give you a short Y-cable that connects to the TV Out connector, and which splits into a composite and an S-video connector.

S-video is a relatively newer style of connector, and if you have a TV, camera, or VCR with S-connectors, you're in luck, because S-connections give higher-quality images. What's more, an S-video cable is functionally identical to Apple's ADB keyboard cable. This turns out to be a tremendous bonus for those of us planning computer parties in the living room. (More on this later.)

Included with my card was a CD-ROM, a floppy disk, an Xclaim VR User's Guide, an Xclaim Video Player User's Guide, a "warning" paper, and a "we didn't forget you" paper. The warning refers to a conflict with the Graphics Accelerator v. 1.0.5 extension that gets installed with Systems 7.5.3 and 7.5.5. Basically, you have to remove the extension to avoid trouble.

The "We didn't forget you" paper is to be sent in with your Vendor Invoice Number to get a copy of Bungie's *Weekend Warrior*. It seems the game requires QuickDraw 3D v. 1.5, which wasn't out when I bought my card. Which brings us to QuickDraw 3D.

Most of us would have little need for a QuickDraw 3D accelerator, since we aren't using QuickDraw 3D to begin with. However, this technology is supposed to improve the speed and image quality of 3D-style games, as well as provide a 3D model standard for interchange between applications. Because it's still relatively new, there aren't many games (or applications) that use it yet, but the number should increase. The CD-ROM includes the QuickDraw 3D installer (v. 1.0.6), QuickTime 2.5, some demos, and some information and extras for all this QuickStuff.

You also get one composite video cable, and one s-video cable.

first two graphs in this section are pretty helpful. the rest aren't/hj

Installation

The software that comes with the VR card is first class. To begin with, you use the most sophisticated installer I've ever seen. It starts with the usual Standard/Custom options, and it includes clear instructions right on the screen on how to do an Uninstall. What really sets it apart is what you see after the install finishes. Some installers make a nice log file, so you can see



Figure 1.

what they put where. This installer has a window very similar to that of Apple's Find File, complete with a scrolling list of every file installed, and you can select any file to see where it went. There is even a "Show Me" button that will open up the folder containing the file. Be sure to use the "Save As..." button to save all this information in a log file.

This incredibly friendly installer may have been prompted by the large number of files installed. Besides the Xclaim Video Player application and the ATI Displays control panel, it puts no less than nine files into the Extensions folder inside your System Folder.

Finally, the installer is "nice" instead of "rude," meaning that it gives you the option of Quitting from the installer without forcing you to Restart. Of course, you do need to restart before you can use the software that was put in, but I hate it when I want to install several programs, and each one forces me to restart.



Figure 2.

The Display Card

The product literature says the VR is a "QuickDraw accelerator supporting resolutions up to 1152 x 870." I found it interesting that on my AppleVision 1710, I could also set the resolution to 1280 x 960 and 1280 x 1024. Nothing like getting even more features for free.

Basically, the card works great for driving another computer monitor, and the 4-megabyte version lets me display millions of colors (24-bit) at any resolution up to 1152 x 870, whereas the 2-meg model can only display thousands of colors (16-bit) at anything above 832 x 624.

The Control Panel

The control panel that gets installed is called ATI Displays (figure 1) and is also a very sophisticated piece of engineering, with a nice Apple Guide file to explain things. It lets you call up dialog boxes for keyboard shortcuts, 3D compression level, and Mac2TV video out settings (figure 2). This last one includes sliders for Anti-Flicker, Contrast Shadow, and Highlight, and radio buttons for Dot Crawl, Sharpness, and Video Standard (NTSC or PAL), among others. It gives you quite a bit of control over the video display, maybe more than you ever knew you needed. In reality, it's difficult to get a clear computer display onto a TV screen, and ATI has done a great job in this area.

If you have a computer monitor connected to the card, you are warned when you switch on the video output that the computer monitor will be dimmed. This is because the NTSC video operates at 60 Hz, which might be dangerous for some computer monitors. Most modern multisync monitors can handle it, so the user's guide tells you how to turn the monitor display back on if you want to (which results in it showing the same display as that on the TV). Also, after the computer display is dimmed and the video output comes on, a final dialog box appears on the TV screen, asking if you want to continue. The default button, which you can push by typing the Return key, will shut the video off and turn the computer display back on.

This sounds complicated, but is a very well thought-out procedure. If your monitor dims and for some reason you

can't see the video display (bad cable, etc.) you can't see anything on the monitor, so you can back out of the situation just by hitting Return. The only improvement I can think of would be for the Warning box to tell you to hit the Return key if anything goes wrong. This is a very handy time to have two computer monitors on your Mac.

Another display the control panel can produce is the 3D Memory window (figure 3), which lets us see how memory is allocated among such things as the screen, textures, back buffer, and Z buffer. I don't know what they all are, but I sleep better knowing I have this information at my beck and call. (The user's guide does have descriptions of them.)

If you still need more information, the Details button brings up the Details window (figure 4), which lets you find out what each of those

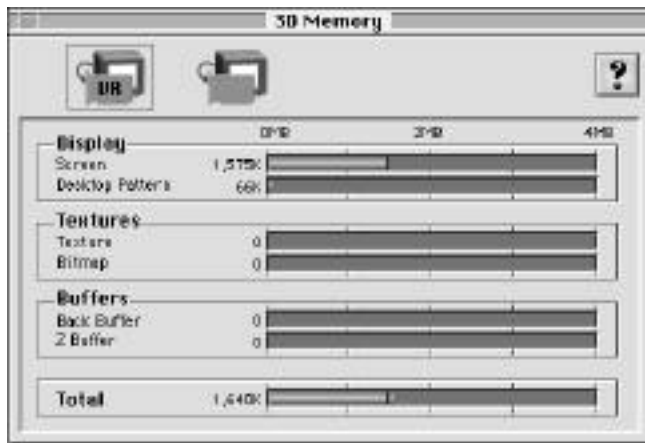


Figure 3.

control panel is gone, but when you close the ATI Displays main window, it is still in memory, invisible, and easy to forget. However, if you switch to another program, such as the Finder, then switch back to the ATI program, the main window opens again automatically. It could be that the programmers were just trying their best to adhere to Apple program-

mine was version 1.0. I tried it one day, then decided to compare it to the Apple Video Player. Whoops.

The Apple Video Player requires the Video Startup extension, and it tells you so in no uncertain terms, so I installed it, shut down, and went to bed. I often install extensions just before shutting down at night, so I don't have to "waste a restart." I forgot about it for a while, and then one day decided to try it out again. The Apple Video Player could not detect the proper video

input hardware. This was not surprising, since the PowerCenter has no video input hardware, but I thought, just maybe, there was some kind of video hardware standard interface. No dice (but see below). So I tried launching the Xclaim Video Player, and got:

"Video can no longer be displayed because Xclaim Video Player is out of off-

...the NTSC video operates at 60 Hz, which might be dangerous for some computer monitors. Most modern multisync monitors can handle it, so the user's guide tells you how to turn the monitor display back on...

extensions the ATI installer stuck into your system is for, as well as the version numbers. This is an amazing, helpful addition, and it can also check the versions of the QuickTime and QuickDraw 3D extensions in your system.

Finally, the ATI button gives you tech support contact numbers and a Report button that generates a Problem Report listing of all the pertinent information on your computer and system, extensions, version numbers, etc. Fantastic!

The only nit I have to pick is that this control panel acts more like an application, in that closing the main window does not do a Quit. When you close a control panel window, the



Figure 4.

ming guidelines.

The Xclaim Video Player

ATI includes its own video capture application, called the Xclaim Video Player, and

screen video memory."

Little did I know that this mysterious message was to haunt me again and again. Nothing in the documentation explained how to rectify this situation. I tried increasing the application's memory allocation, but it had no effect. Eventually I removed the Video Startup extension (required by the Apple Video Player), restarted, and got the same error message, until I launched the Apple Video

Player. It complained, of course, that the extension was missing, but afterwards the Xclaim Player launched and worked.

Again, some days went by, during which I was solving another unrelated extension con-

flict. When I came back to the Xclaim stuff, I got the “offscreen video memory” error message again.

ATI tech support replied that this problem could be due to insufficient offscreen memory, which might be solved by reducing the number of colors and/or the screen size, or to the ATI Video Digitizer extension being corrupted or having a conflict with other extensions. I spent a lot of time looking for an extension conflict, but I never found one. Basically, I just have to remove some extensions, and the Video Players (both Apple’s and the Xclaim one) work. It doesn’t seem to matter so much which extensions I remove, so all I can guess is that some of the extensions also use some offscreen memory. I would suggest to ATI that since they already have a wonderful memory measurement tool (Figure 3), it would be incredibly helpful if they could add some indicators for this oh-so-important offscreen memory. I’d certainly welcome any further information or experience anyone might have to share concerning this.

An interesting memory sidelight is that the Xclaim Video Player application Info box, like many applications, tells you that its memory requirements will decrease by 436K if Virtual Memory is turned on, but the manual says to turn VM off to optimize video capture. I never have VM turned on, and so it was off for all of my testing.

Needed: A Video Digitizer Standard

As mentioned above, after a lot of restarting, extension-conflict hunting, emailing ATI, and upgrading my system from 7.5.3 to 7.5.5 (which is recommended by ATI), I was able to get both the Xclaim and the Apple Video Players to work. On my PowerCenter 132, which is based on Apple’s 7200 motherboard, I found that I needed the “7200 Graphics Acceleration” extension in to make the Apple Player work. I had assumed that the ATI Accelerator was supposed to replace this, but it turns out that they are both needed.

I also tried using VideoShop 3.0.2, formerly sold by Avid and now being supported by Strata. After I got the Apple Player to work, I was encouraged that maybe there really was a video input standard. In fact, the user’s guide states: “XCLAIM VR’s video input can be used with any third party application that supports QuickTime capture through video digitizer



Figure 5.

components.”

VideoShop didn’t work. Cornell CU-SeeMe 0.85b1 didn’t work. White Pine Software’s Enhanced CU-SeeMe 2.0 didn’t work. That pretty much covers the applications I was hoping to use with my video capture card.

I contacted Strata, and they said this card had not been tested yet, and that it probably wouldn’t work with VideoShop. ATI said they were getting mixed reports on CU-SeeMe, and they recommended sticking with the Enhanced White Pine version. Personally, I like the Cornell version much better, since it is free. All I can conclude is that there is supposed to be a video digitizer standard out there, but it sure doesn’t seem to be very well adhered to.

Sound Problems

The Xclaim Player seemed to have a few problems with the live audio, which you hear through the computer’s speaker while the Video Player application is running. Occasionally the audio would disappear, but clicking twice on the speaker icon (to mute, then un-mute the audio) would sometimes bring it back. This didn’t matter much, though, because of a much worse problem. I never managed to capture much sound along with a video. When I played back any QuickTime movie file I created, there was usually a click, or some other half-second of noise at the beginning of the movie, and then silence. Using the “movie info” function (in MoviePlayer) to check the sound track showed that it had a duration of five frames, and a data rate of 0.0 bytes/sec. I even tried capturing a movie with no video (only sound), and it also came out five frames long. A frame of video is one-thirtieth of a second.

The Apple Video Player also failed to capture sound along with the movie. VideoShop

couldn’t display any live video at all, but surprised me in being able to capture sound! So, I ended up with two applications that can capture video with no sound, and one that can capture sound with no video. Very helpful.

The ATI Web page alludes to PowerComputing machines (such as my PowerCenter) having their own sound problems, so it is possible that these are due to my machine and not the ATI application. However, I can capture sound

just fine using SimpleText and Nisus Writer. I’m still searching for a solution.

Video-Grabbing Fun

When I first got the Xclaim Video Player to display live video on my screen (figure 5), I had a tendency to immediately increase the brightness on the live-video display to make it look “right.” However, when grabbed still frames, they were washed out. Turning the brightness back down, almost to the middle position, improved the stills. I also found myself sliding the color slider all the way up, again to get the video to look right. The picture brightness and color depended a lot on the incoming video signal and picture content, and had to be adjusted manually for best results.

When you click on the little camera button, a frame is grabbed, and a thumbnail appears in the Pictures window. The best way I found to quickly check your snapshots was to drag the thumbnail out onto the desktop, creating a picture clipping. Then just double-click the clipping to see the picture. The actual pictures associated with the thumbnails can be selected and saved as PICT files, which will open with SimpleText. You can also drag an images directly onto the desktop, or into another drag-and-drop supporting application.

Besides the remote control, there is one additional floating palette called Tools. The grabber hand can be used to grab still frames and drag them into the Pictures window, creating a thumbnail just as the camera button does. The marquee tool could be used to drag out a marquee on the live video, after which the selected area could be dragged to become a thumbnail, using the grabber.

The zoom-in and -out tools, along with the positioning cross, were really fun, once I figured out how they worked. Clicking in the

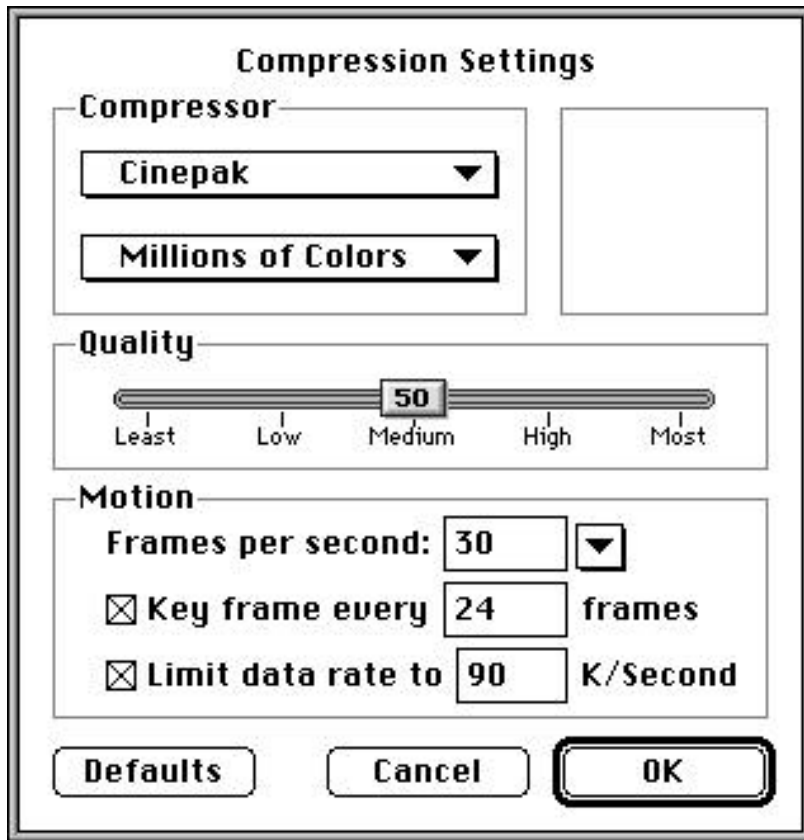


Figure 6.

window with the zoom-in tool did nothing. You have to drag out a marquee on the live video with it, and when you let up on the mouse button the box you selected zooms to fill the window. If you drag out a box that is very tall and thin, or short and wide, the zoomed live video will be distorted, since it zooms to fill the live window. Once you had zoomed in, you could do it again, up to a certain point. Selecting the zoom-out tool and clicking in the live video caused it to zoom out one level. In other words, it remembers each of your zoom-ins, and goes back to them, in reverse order, as you click with the zoom-out tool.

It's hard to imagine a use for all this incredible technology, especially after you see how blurry and jaggy zoomed video is. I tried to create a zoomed-in QuickTime movie and found that it just captures the normal unzoomed video. However, you can grab zoomed still frames.

There is a much easier and more intuitive way to create distorted stills (if you so desire), and that is to simply grab the lower-right corner of the video window and drag it to reshape the window. Still frames grabbed from such a squashed display come out exactly like the original (in other words, squashed).

Mostly, it's just incredibly cool to grab the live video window and resize it while the video is moving—smaller, larger, wide, tall—just like having an amazing rubber TV. It makes a great gee-whiz demonstration for all your friends.

Conclusion

While I am still in the midst of solving some technical problems, I do want to reiterate that the ATI software seems excellent, and the hardware works well. I must also commend the company for very prompt email tech support, as I have received responses to my inquiries quickly, often within 24 hours. I wish all companies were so helpful.

I will leave you with a couple of cool things to try with this card. The first is to run a puzzle-type screen saver, such as that which comes with DarkSide, while you have a live video window playing on the screen. This is particularly effective on passers-by who don't yet know that you have the card installed. In my case, I used the card's video-out capability to place this resulting conflagration onto my living room TV, away from the computer, then invited friends in to try and help me "fix" my television reception.

The second is really eerie, and I found it quite by accident. If I placed the live video window on my 13-inch monitor, which is connected to the computer's built-in video port, and grabbed a screen shot, the resulting PICT file, displayed with SimpleText, came out as expected. But if the video window was on the monitor connected to the ATI card, the screen shot simply showed bright pink where the video was supposed to be. Then I found that this bright pink area is magically transparent. You can slide the SimpleText window all over your desktop, and you just see the bright pink box within the screen shot. But if you have a live video window open on the desktop, and you slide the SimpleText window on top of it, the live video shows through, right inside the PICT file. "Twilight Zone" time. Have fun! 

David Scott is a computer consultant living in Tokyo. He enjoyed having an excuse to play around with video on his Mac and to "test" a computer game. He's very glad he didn't blow out his ADB port, and hopes someday to actually capture a movie file with sound, after which he plans to become a famous writer, director, and producer. David can be reached at Tokyodave@aol.com © David Scott, 1997

ATI Xclaim VR

Minimum system requirements:

Power Macintosh with a PCI slot,
System 7.5.2, QuickTime 2.5,
QuickDraw 3D 1.0.6, 16 megs memory.

System as tested:

PowerComputing PowerCenter 132, 32 megs RAM, Seagate ST31055N 1-gigabyte hard disk, Apple 13-inch RGB connected to the built-in video port, AppleVision 1710 connected to the Xclaim VR card, System 7.5.5, QuickTime 2.5, QuickDraw 3D 1.0.6, AppleVision Fix v1.1 installed.

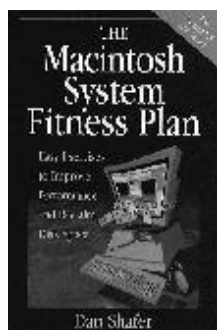
ATI Technologies Inc.

33 Commerce Valley Drive East
Thornhill, Ontario, Canada L3T 7N6
phone: (905) 882-2626
email: 76004.3656@compuserve.com
URL: <http://www.atitech.ca>
4-meg VR card street price: \$300

Three Macintosh System Books

by Don J. Modesto

The Macintosh System Fitness Plan



Dan Shafer
Addison-Wesley, 1995
ISBN 0-201-48329-7
152 pages

Pros: Excellent procedures for tuning your system performance; clear and easy to understand; useful appendix listing

popular software with its creator/type codes.

Cons: Many items absent from creator/type list (such as FreeHand); could use a list of Apple inits/cdevs with short explanations; expensive for length.

Ideal readers: Invaluable for beginning and useful for intermediate users.

Price: US \$14.95

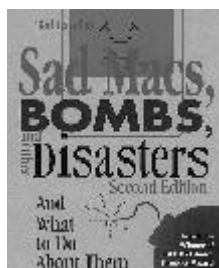
The Big Mac and Trimmings

This is a book—useful for experienced users, invaluable for beginners—for pruning and tuning your Mac. It begins with an introduction to the System Folder and explains how to eliminate unneeded items and then does the same for the rest of your disk. Then it moves on to managing memory and finishes with comments on keeping your system in top condition. Sections proceed by introducing and explaining a topic and then providing an “Exercise” which may involve cutting unneeded scrapbook items or finding type/creator with ResEdit.

Truth be told, Apple ought to bundle something like this with their entry-level CPUs. Depending on Apple’s documentation, magazines, and user groups, a beginner could still spend years acquiring the knowledge packaged here so economically.

Long-time Mac users will already be familiar with the standard techniques for Mac management such as rebuilding desktops and allocating memory. And much of the book is common sense (trashing tutorials and stationary you don’t need, e.g.) So while there are still a couple of new tricks here, the price is too high (I should think a 152 page book would go for under \$10) to justify its purchase just for these. Still, this book provides a good checklist of things to watch and common-sense ways to deal with them.

Sad Macs, Bombs, and Other Disasters, 2nd Ed.



Ted Landau
Addison-Wesley, 1995
ISBN-201
40958-5
868 pages

Pros: Clearly

written, logically arranged comprehensive guide to Mac trouble-shooting; tables of error codes and useful diagnostic and problem-solving software with publisher contact information; symptom index; cross-referenced to related information throughout.

Cons: None

Ideal readers: Useful reference for all level users

Price: US \$34.95

Sad Macs, Happy Users

This is the book to go to when things go bump in the night. It gives users background information for understanding what problems are and then proceeds with symptom-based chapters: bombs,

and problems with startup, documents, printing, fonts, graphics, PowerBooks, and Power Macs. Each chapter describes the process at work and what can go wrong at various stages offering “Solve It!” sections with multiple, simple, clear explanations of what to do rendered in clear writing describing possible outcomes of each user action. Often reference to further solutions is made and these are compiled in Section III, “The Fix-Its.”

Section I provides invaluable information that should be required reading for all new computer users. What a system is; where items go in the System Folder; what software you should have for maintenance, prevention, and trouble-shooting; retrieving trashed files; general strategies for dealing with emergencies.

Exemplis Gratis

As an example of the approach to a specific issue, Chapter II.7 on printing problems, begins by directing you to different chapters if printed docs do not look as you intended. It is also quite up front in saying that the focus is on Apple printers and that if you are looking for advice on HP printers “you won’t find too much help here.” I appreciate this candor as one who more than once has plowed through pages of text only to discover that I was in the wrong place.

Next are a series of sidebars describing different types of printers, the use of the LaserWriter utility, AppleTalk, and some words on drivers. Along the way are references to related topics elsewhere in the book. The Chooser, Page Setup, Print Dialogs, and Print Monitor, are all carefully explained and there follows the “Solve It!” section with several pieces of general advice (try again, restart, free up memory, reinitialize the printer) and then 25 pages of specific problems each listing symptoms, causes, and solutions.

When problems overlap, maybe a printing problem involving graphics, e.g., there is a boldface reference to the pertinent chapter. Often this overlap will involve lower level issues which are covered in the 200 pages of Section 3: Hardware/Software incompatibilities; problems with preferences or missing files, inits and cdevs, system software, memory management, viruses, fragmentation, the desktop; Disk First Aid; PRAM; disk formatting, etc.

In Sum

Sad Macs is a definite must-have. Apple ought to bundle it with their entry level machines (although it would benefit veterans, too).

Macintosh Crash Course



Glenn Brown

AP Professional Pub.

ISBN 0-12-135910-7

517 pp. (paperback)
w/ CD

Pros: Useful catalog of software relevant to crashes;

index of conflicting extensions/control panels; interviews with leading software authors; wide range of utilities etc. on CD.

Cons: Misleading title; no diagnostic reference by symptoms; no explanation of error codes (not even a reference in the index).

Ideal readers: Beginners and intermediate users

Price: not available

Macintosh Crash Off Course

The misleading, mistitled Macintosh Crash Course is essentially a catalog and not a course at all. It is dedicated to managing your Mac with particular reference to relevant Shareware. Issues covered include extensions, memory, file sync, system versions, compression, diagnostics, viruses, backup, conflicts, prevention and recovery, fonts, printing, formatting, video, PowerBooks, PowerMacs, and telecom.

Chapters typically begin with a one page introduction—"What is compression?," for example—and proceed to brief descriptions of software available for dealing with it. Along the way are interviews with software authors (save two, all men) where we learn their favorite programming

languages and what they do in their free time. Familiar with the basics of system management, I found Appendix B to be the most useful section of the book. It offers 17 pages of conflicts beginning with AltWDEF vs. Microphone II and ending with WYSIWYG Menus 4.0.1 vs. Word 6.0. Other appendixes are a glossary, an index of the CD, a list of sources (Abbott Systems to Joe Zobkiw), and a note on production of the book in your hands replete with pics from a borrowed QuickTake. There is also an index.

My first impression of the book was good. "Crash Course." What a clever title! But I confess to disappointment upon reading it. It failed me the first time I looked up an init: I couldn't find the Speech Guide Additions—Apple software—which was lurking in my Extensions folder. Then I discovered that there was nothing like a diagnostic table or flow charts to walk you through the process of tracking down and eliminating problems. There are plenty of references to software which could help you with this but the text itself offers but cursory introductions to things like SCSI voodoo. I realized that the book is mistitled. It is more accurately called something like "A Catalog of Mac Management Software." Under this name it does a good job. But buying Crash Course to learn about diagnostics and solutions is like buying a publisher's catalog when you want to read a novel.

That said, the catalog function is adequate, if ambitious. Descriptions are brief with few insider tricks, but for someone needing to know what options are available, it does the job. 🐉

Don Modesto resides in Tokyo and can be reached at modesto@gol.com.

Copyright © Don J. Modesto, 1997
All rights reserved

NisusWriter 5 Suite:

by C.R. Clowery

I need to say at the start of these reflections that I like NisusWriter and I am rather tolerant of its foibles. The 5.0.x upgrade still lacks robust tables, an outliner, and the 400+ improvements that its devoted users request. Still and all NisusWriter works for me in ways that no other word processor can. I have used it for three years and have watched it evolve through two upgrades. Apple Computer proclaimed NisusWriter the best application on the Mac OS for inputting and formatting Chinese, Japanese, and Korean two-byte code via Apple's World Script II. My purpose in this essay is less to praise NisusWriter's recent upgrade to 5.0.x, which brings us fine, helpful, but not spectacular improvements. What I will focus on in this suite of essays is how circumstances beyond Nisus Software's control gutted the 5.0 upgrade like a fish and robbed it of its New Big Thing. I will use NisusWriter's recent struggles as a window to view one aspect of American corporate culture at its most vital and its most brutal.

The story illustrates a remarkable phenomenon in the culture of the computer marketplace: how a major company's sudden, profit-driven change of course ends dreams. On the small scale, this tale is a cipher that footnotes a larger history: how a corporate decision shakes up the lives of good people. On a larger scale, without wanting to sound pretentious, this exercise offers insight into the creed and the compass bearing of the world's most powerful ideology: consumerism. Be it goods or information, America sets the pace and teaches the world how to accumulate brand-name stuff. Silicon Valley is one of the hottest-burning forges where the hammer hits the metal that shapes our national, perhaps the world's destiny. Charting its changes on the front lines is a worthwhile pursuit.

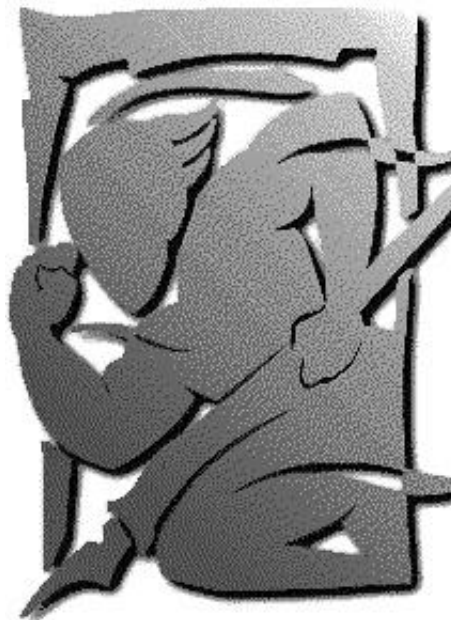
The story illustrates a remarkable phenomenon in the culture of the computer marketplace: how a major company's sud-

den, profit-driven change of course ends dreams.

Nisus Software's fortunes for better or for worse are tied irrevocably to Apple and the Macintosh computer. Nisus is a small company founded and led by thinkers, writers, scientists and university intellectuals: people with active minds whose products explore and redefine the limit of the possible. Nisus has been a pioneer in adapting and implementing the latest Apple technologies; that particular karmic link has taught the Nisus team and many Apple developers the truth of impermanence and the wisdom of patience.

The Buddha taught that impermanence is the fundamental nature of all "conditioned things". He said that everything made up of component parts, including obviously, the components ("Live Objects") of OpenDoc, will change and come apart sooner or later. Suffering inevitably results, to the degree that we are attached to the things we love. Whatever arises, also ceases. It's "natural". A wise person witnesses this fundamental truth and reduces his/her attachments to conditioned things. Joe Kissell and the Nisus team, CI Labs, the champions of OpenDoc, as well as many other small developers for the Mac OS, owe a big thank you to Apple Computer for giving them yet another chance to refine their wisdom and learn to let go. A modern corporate motto says, "You can tell the pioneers. They are the ones with the arrows in their backs."

In this case Joe Kissell's back looks like a bulls-eye. Nisus decided to make OpenDoc support the Big New Thing in NisusWriter 5. Joe, as Product Manager, successfully made NisusWriter 5.0 an OpenDoc "container." Nisus implemented this new technology first, before the other major word processors. It seems that WordPerfect and Claris Works were in the process of developing their own containers. What's more, Joe and David McKee also co-authored a book based on



OpenDoc, called *Cyberdog: Live Objects On the Internet* (MIS Press, New York, 1997). They had invested a great amount of time in preparing the book and Joe had, to some extent, staked the reputation of NisusWriter 5 on this technology.

Their excitement over the NisusWriter 5.0 upgrade, released November 1, 1996, was evident. The Nisus Web site announced:

"NisusWriter 5.0, featuring OpenDoc Support, is the first commercial Macintosh application to be an OpenDoc/Live Objects container. NisusWriter will allow you to embed any Live Object (OpenDoc part) within your NisusWriter documents. Read the list of new features!"

Unfortunately, Open Content, the library that one had to use to make NisusWriter (NW) into a container, was buggy and incomplete. There was no option for Open Content, thus OpenDoc was temperamental, and prone to crash. The crashes and glitches weren't Nisus's fault. Nonetheless, they marred NW 5.0's new flagship feature from the start.

Nisus' integrity appeals to the purist: Nisus remains Macintosh-only, and has grown and changed for years without losing its essentially home-grown identity, which is a better, more intelligent alternative to the mega-application.

The press reviews of NW 5.0 were mixed: Mac User gave it four mice, and Macworld three stars. Mac Addict called it spiffy; but MacWeek awarded only two diamonds. Most reviewers felt that NW 5.0 was a decent, though not outstanding upgrade, and the OpenDoc support—supposedly the best new attribute—was its weakest feature. Perhaps if Nisus had not included OpenDoc support, the reviews would have been better. If the bad news had stopped there, it would have been enough grief for the year. But high muck-a-mucks up on Apple's design totem pole then canceled the entire OpenDoc project, and the Buddha's description of the conditioned nature of the universe begins to make more sense. "What ever arises, ceases. Don't hang on."

What Else Is New in NisusWriter 5?

Talk about testing patience: Nisus had expanded support of the Apple technology PowerTalk to include multiple file formats, digital signatures, opening files from the In Tray without going to the Finder, tagging and deleting letters, etc. And they did so just in time for Apple to drop it! Nisus quickly added QuickDraw GX printing

support and Apple dropped it!

Other Apple technologies seem to be here to stay. My favorite is World Script implementation which Nisus does better than anybody. The "Language Key" (dongle) is no longer needed to work in non-Roman languages such as Chinese, Korean, and Arabic. Linguists, international business types, and non-English speakers will agree that this one improvement is worth the entire upgrade. PowerBook owners no longer have to stick that chunk of plastic out the ADB port to input kanji.

Drag Manager support lets you drag and drop Nisus's signature feature, non contiguous selections. For graphics, Nisus was the first major application to support the Translucent Drag Manager. You can drag a PICT file, QuickTime Movie, or text file onto the open NisusWriter and it cleverly displays it without touching a menu.

There are many new changes throughout; categories that received upgrades

Created Entirely with
Nisus Writer 5.0 

include Compatibility, Editing Tools, Find/Replace, HTML, Interface Improvements, Language Key, Macros & Glossaries, Opening & Saving Files, Preferences, Styles, and the Table Tool—all sport improvements.

NisusWriter 5.0.4 Update Released (11 April 1997)

Updaters are now available that will patch U.S. or British versions of NisusWriter 5.0, 5.0.1, 5.0.2, or 5.0.3 (68k or PPC) to create version 5.0.4. Version 5.0.4 features numerous bug fixes, OpenDoc support via a separate (optional) module, and various other enhancements. Also included are some supporting files (including the Nisus Balloon Help Tool and the HTML Styles style library) that have been updated.

NW 5.0.x promises to be the last maintenance upgrade before undertaking a major change. Much of the NW 5.0 code was a legacy and set in stone; Joe Kissell, as Project Manager, inherited those algorithms and had very little room to move.

The next version is under his control and should chart some expansive new horizons. Joe, in a recent letter to the Nisus List, predicted,

"If the gods are smiling on us, this upgrade, code named Hoover, will appear before the end of the year, will have a much-improved interface, will have at least one big new feature that everyone has been bugging us about for years, will not cost a lot of money, and will be the model of speed and stability. In other words, it, uh...won't suck."

Further, He Explained,

"I'm excited about Hoover, and there are quite a few people here at Nisus who are determined to reclaim NisusWriter's reputation as the grooviest word processor on the planet. We can do it."

A Winning Attitude: Adaptable Tools & Accessible People

Many discerning writers, teachers, students, and linguists the world over (Nisus sells more software overseas than in the USA) prefer NisusWriter over other major word processors. Why? There seems to be a combination of qualities. Certainly the major reason is its unique, powerful features. Nisus takes an attitude reminiscent of European-style craftsmanship. Lovers of elegant solutions to problems are drawn to Nisus for the hands-on approach it affords. Instead of Microsoft assigning a platoon of engineers to design a Start button for you, the idiot user, to push, Nisus gives us a macro language and scripting tools and instructions to transform and automate our software tool any way we like. On the downside, macros are often intimidating to mathematically- or logically-challenged folks like myself. Loyal users on the Nisus List and the Nisus Corral (see below) provide help and user-friendly instructions.

Nisus's integrity appeals to the purist: Nisus remains Macintosh-only, and has grown and changed for years without losing its essentially home-grown identity, which is a better, more intelligent alternative to the mega-application. Likely it's also because people appreciate Nisus's accessibility. Nisus is a small company, designed by folks who are academics, thinkers, and writers. Including engineers, marketing, tech support, and cookie bakers, the com-

pany numbers fewer than twenty in all. Microsoft must have twice that many legal staff alone. When you call Nisus you have a good chance of getting the project manager or the CEO on the phone.

And users do call. The list of suggested improvements sent in by users world-wide numbers over four hundred items. Nisus publishes the complete list on their Web site. The strategy seems to work: people care about NisusWriter with a passion and expect to tailor, tinker, and improve it, in conversation on the Nisus List with the engineers and the users in the wider Nisus community. 🐘

The Nisus Community

Devoted users have created a virtual community around their word processor. Stops along the highway include:

Nisus Mailing List

An unofficial Nisus mailing list is maintained by user Fred Terry. This is a forum where you can share questions, tips, and complaints with hundreds of other NisusWriter users. To subscribe to the Nisus mailing list, send email to listserv@listserv.dartmouth.edu.

In the body of the message (no subject is required), include the line: subscribe Nisus Your Name. To post messages to the list, send them to:

Nisus@listserv.dartmouth.edu.

The Nisus mailing list is one of the doors through which creative users request new features. The hundreds of NisusWriter feature requests include ideas both inspired and insipid: everything from "make it faster," to "make the text-to-speech default voice female."

The Nisus Corral

...which opened March 23, 1997. NisusWriter user Kirk McElhearn has volunteered his time and server space to host The Nisus Corral, a new online repository for macros, tips, and other NisusWriter resources contributed by users. This is a great place to collect NisusWriter facts, tools, and info, or offer your own insights to other users. <<http://www.mcelhearn.com/nisus.html>>

HTML Macros

Sandra Silcot, a NisusWriter user from Australia, has developed an outstanding set of HTML macros, a version of which is

included with NisusWriter 5.0. She has developed a new Searchable Archive of all Nisus mailing list postings. One can catch up on FAQs, feature discussions, and the latest tips at:

<http://www.its.unimelb.edu.au/hma/pub/nisus/>

Frontier

NisusWriter ships with Frontier 4.1, a system-level scripting system. Any Frontier command can be activated from within NisusWriter, and Frontier commands can also be embedded in NisusWriter's macros.

Math Type

Design Science Inc. is the creator of Math Type, a more complete version of NisusWriter's built-in equation tool. Registered users of NisusWriter can upgrade to a high-powered version of Math Type for a low price.

Requirements:

Runs on any Macintosh or Power Macintosh with a 68020 or greater processor System 7 or later;
System 7.5.3 or higher recommended
4 Megs RAM for 68k Macintoshes
2 Megs RAM for Power Macintoshes with virtual memory or RAM Doubler; 5 Megs for other Power Macintoshes.

NisusWriter 5.0.4

Company: Nisus Software, Inc.

Estimated Price: \$199 US

Upgrade from Previous Versions: \$79.99 US

Competitive Upgrade: \$149 US

<http://www.nisus-soft.com>

C.R. Clowery writes *Asia-related software reviews for BMUG and won't bet his shirt that Nisus has learned its lesson, not to blaze trails with new Apple technologies. Wouldn't a Rhapsody-native NisusWriter 6.0 be keen?*

Wacom Artz II and Erasing DuoSwitch UltraPen

An Old Dog Learns New Tricks

by Gary Gibson

When I saw the first Macintosh back in 1984, I was amazed. At last, here was a machine I could draw on without having to write my own graphics package! Two years later, I was the proud owner of a Mac Plus and was ready to start drawing. There was only one small problem: Drawing with a mouse was like trying to draw with a brick.

Fortunately, in 1986 graphics tablets were available for the Mac. I bought a Summagraphics 6-by-9-inch tablet, but was frustrated by the wire running from the end of the pen to the tablet (okay, bank pens have a chain connecting them to the table too; I can handle this) and the fact that the pen had to be held almost perpendicular to the tablet surface before the tip would activate. Still, it was better than the mouse, and I was able to work around the perpendicular problem by holding down the mouse button with one hand while holding the pen in my drawing hand. I was actually able to do things with this method—but there had to be a better way!

Along Came Wacom

A few years later, a new company called Wacom came out with a wireless tablet. Not only that, but it had a pressure-sensitive pen, which meant that (assuming the software supported it) the width of the line would depend on how much pressure you put on the pen, just like a real pen or pencil! The tablet came in several sizes: 6 inches by 9 inches (which matched the size of the Mac Plus screen), 12 by 12, and even larger sizes up to 25 by 18! Only one paint program

(Oasis, which faded from view a year or two later) took advantage of the pressure-sensitivity back then, but others would soon follow. I bought a 6-by-9 Wacom tablet in 1991 and have been happy with it for years.

Over the years, my trusty Wacom tablet has served me well. Even when Wacom released newer models (it had to happen someday) the free driver updates would still support my tablet. There was a short period of time during which the new drivers didn't support the old tablets, but that ended quickly (perhaps there were enough complaints from the many owners of the older models). I would probably still be using it today if I hadn't had the opportunity to review the new Erasing UltraPen for BMUG.

What is a Tablet, Anyway?

I think it's safe to say that most artists who have used a computer in the last few years know what a graphics tablet is. But in case you're not one of them,

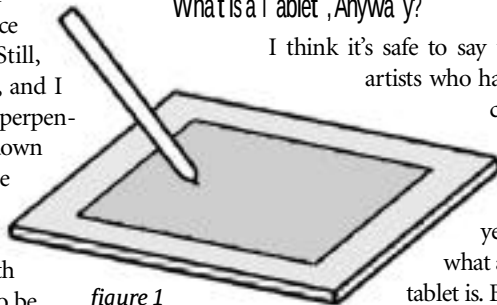


figure 1

let me give you a brief tour. A graphics tablet is essentially an electronic drawing pad with a matching pen (see figure 1). The pad is a flat, relatively lightweight piece of plastic that can sit on your lap or on a table. It is connected to the computer via some sort of cable (either serial or ADB). The pen is also a lightweight plastic which fits easily in your right or left hand. You operate the tablet by moving the pen over the surface of the pad. The tablet driver software will convert the position of the pen into coordinates that can be used by other software (or the Mac OS

itself) to move the screen cursor and/or create other effects. The Wacom tablet takes this one step further by providing additional information such as pressure (how hard you're pressing the pen) and tilt (the angle that you're holding the pen).

Okay, so why would you want to use a tablet over the mouse, or a trackball, or some

The new tablets including the 4-by-5 model, all have a resolution of 2,540 lpi. That means that even the tiniest pen stroke can be accurately detected. In addition, the new tablets have 256 levels of pressure sensitivity, up from the 60 levels of pressure sensitivity in the older tablets.

other device? Well, for one thing, it's easier. With practice, you could probably learn to draw pictures with a mouse or a trackball, but (unless you've never used a pen or a pencil in your life) with a tablet, you don't have to practice. You can just pick up the pen and draw, or paint, or sign your name. Which brings us to the Wacom tablet.

The early Wacom tablets were great, but I have to admit that the current Wacom tablets are even better. The current Wacom ARTZ II line of tablets are lighter, sleeker, and loaded with convenient features. They range in size from a 4-by-5-inch ArtPad model to a whopping 18-by-25-inch model. They all come with the new DuoSwitch Erasing UltraPen by default, but other types of pens (and pucks) are available. More on the pens in a moment.

With the exception of the 4-by-5 model, all of the Wacom tablets come with a menu strip along the top, which contains a number of user-defined and predefined function buttons. These buttons can be mapped to macros or keystrokes, and they allow you to access common graphics application features from the tablet without having to go to the menu bar. At first I thought this was overkill, but once I started using the menu strip, I found it to be a very convenient feature. You can also control some of the pen features from the menu strip instead of going to the tablet control panel. You can change the pen from absolute to relative (mouse) positioning and back. You can also change the pressure sensitivity to soft, normal, or firm.

Another feature of the new tablets is the improvement in resolution and pressure sensitivity. The old tablets had a resolution of 500 lines per inch (lpi) for the 6-by-9 model and 1,000 lpi for the larger models. The new tablets, including the 4-by-5 model, all have a resolution of 2,540 lpi. That means that even the tiniest pen stroke can be accurately detected. In addition, the new tablets have 256 levels of pressure sensitivity, up from the 60 levels of pressure sensitivity in the older tablets. This gives you a lot more flexibility when drawing, and makes it much easier to draw fine lines.

More Than a Pen

The original Wacom tablets had two basic types of pens: standard and pressure-sensitive. The pressure-sensitive pens came in two flavors: soft and firm. Now, there are several different types of pens to choose from, and all of them are pressure-sensitive and can be adjusted for either firm, soft, or

In some applications like Fractal Design Painter and Adobe Photoshop the UltraPen eraser automatically activates the application's eraser tool, while leaving your current brush choice on the pen tip

normal feel. The standard pen is the Erasing DuoSwitch UltraPen.

The UltraPen is slightly lighter, thinner, and shorter than its predecessor. And like the newer tablet, the new pen has several convenience features that weren't available in the older models. One of the most striking new features is the eraser.

Now, you might say to yourself, "Big deal. Why do I need an eraser? Why can't I just pick the eraser from my graphics application's tools palette?" I said the same thing. But the eraser turns out to be a very convenient addition. In some applications, like Fractal Design Painter and Adobe Photoshop, the UltraPen eraser automatically activates the application's eraser tool, while leaving your current brush choice on the pen tip. What this means is that you can draw with the pen, turn it over to erase, and then turn it back to the pen tip and continue drawing without ever having to touch the tools palette. Talk about convenient! But that's not all.

Do you want to have a pencil and a pen available at the same time? Now you can. Just select the pencil with the pen tip, and the pen with the eraser. Now you can switch between the two tools by simply turning the pen over. And if that isn't enough, you can also set different pressure-sensitivity ranges for the eraser and the pen tip. And then there's the DuoSwitch.

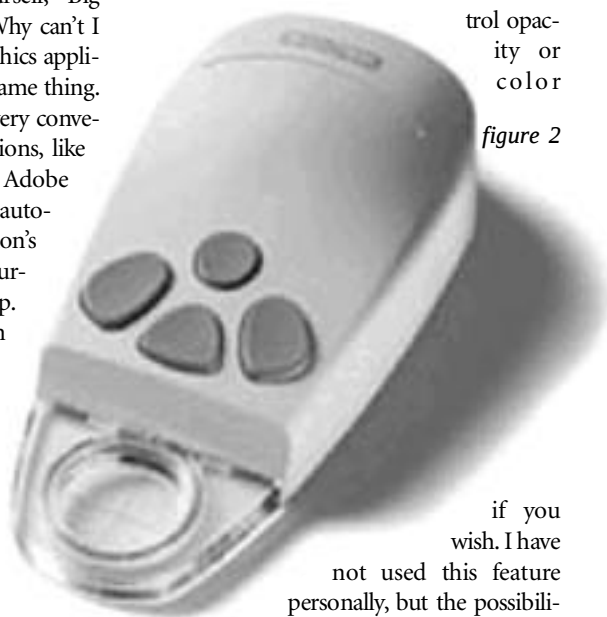
The original Wacom pressure-sensitive pens had only one switch—the pen tip. The new pens have a rocking side switch (DuoSwitch) which provides two additional programmable buttons to be used for whatever you want. I set mine to provide double-click and drag capability. Now, instead of having to press the pen tip twice to double-click, I simply point the pen and press the side switch. Instead of having to press the pen tip down and push the pen across the tablet to drag, I simply point the pen, press the side switch, and then gently move the pen around without having to worry about keeping the tip pressed. Keystrokes, macros, and other functions can be mapped to the pen tip and DuoSwitch as well.

Other Features

As mentioned earlier, the new Wacom tablets support tilt sensitivity. Both the amount and direction of the tilt of the pen can be used to control features in your graphics applications, assuming the application supports it. So, for example, you can simulate a calligraphic pen stroke by changing the tilt of the pen, just like you would with a real pen. This provides more flexibility in using some of the graphics tools. For example, in Painter, you could use pen pressure to vary the opacity of a line, while tilt could be used to vary the width. Tilt can also

be used to control opacity or color

figure 2



if you wish. I have not used this feature personally, but the possibilities are intriguing.

Another nice feature of the new tablets is that all of the electronics are now built into the tablet itself—say good-bye to that floppy-drive-sized tablet processor box. The smaller tablets (4 by 5 and 6 by 8) connect to the ADB port instead of the serial port, so you

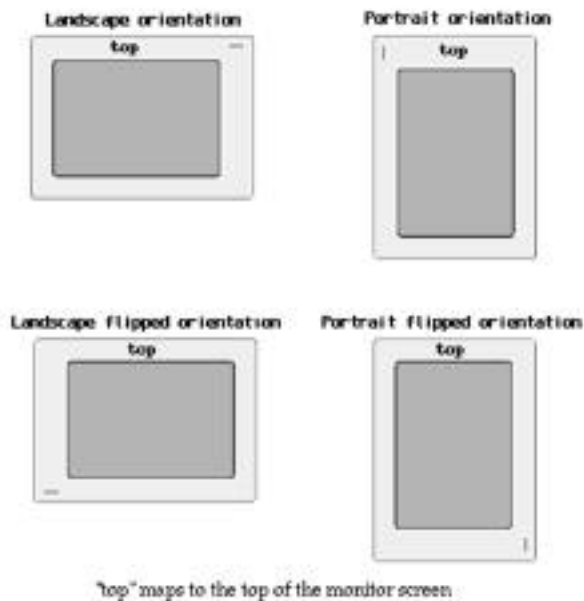


figure 3

can also say good-bye to that separate power cord—and you don't have to worry about switching between a modem or printer and the tablet! Alas, the 12-by-12 and larger tablets still connect to the serial port and still require separate power, but the AC adapter simply plugs into the back of the serial connector and is less cumbersome.

One other feature to keep in mind is that the pen doesn't have to touch the tablet in order to work. It can be anywhere within a fifth of an inch, which allows you to trace drawings on pretty thick paper. In fact, that's enough room to trace the cover of the user's manual when the book is closed! If you prefer a puck to a pen, you can buy one for about \$40. Tablet old-timers will remember the puck. It allows precise tracing (see figure 2).

One drawback to using a tablet is that you have to look at the screen while your hand is moving a pen over a pad. This is fine for a mouse, but is not very realistic for a pen (or pencil, or paintbrush, or piece of chalk, etc.). Wacom has an answer to this as well. The company provides pressure-sensitive pens with ink cartridges or mechanical pencils built in. With either of those, you can draw on a piece of paper and on the computer screen at the same time. These optional extras cost about \$110 a piece—almost as much as the ArtPad II itself. I consider them luxury items, but they're available if you really need them.

The new tablet driver software also adds a lot of nice features to both the new and old Wacom tablets. There are now many more

ways to map the tablet to the screen. You can change the tablet orientation (where the top of the tablet is) to match a tall monitor, or you can move the cord to a more convenient position (see figure 3). You can map part of the tablet to all of the monitor, or all of the tablet to part of the monitor, and you can change the tablet aspect ratio to get different effects. You can also run multiple tablets simultaneously (limited only by the number of serial ports or ADB capacity). Multiple tablets can be separate units with separate configurations, or merged into a single virtual tablet (similar to using multiple monitors on a Mac). You can

also customize features by application, so that the pen behaves differently for different applications.

The user's manual is vastly improved, and it covers all of the features of the tablet, pen, and driver software very well. Its focus is on how to actually use the tablet rather than how the tablet works (i.e. internals) though, so if you want the gory technical details, you'll have to look somewhere else. Check out the Wacom Web site at <http://www.wacom.com/> for technical information, tips, and so on.

Final thoughts

If you are in the market for a new tablet, the Wacom ArtZ II or ArtPad II are the way to go. There are other cordless pressure-sensitive tablets on the market (remember Summagraphics? It merged with Calcomp to produce the UltraSlate), but I still prefer Wacom. Wacom has been around a lot longer and is used by more people (everyone I know who has a tablet has a Wacom) than any other brand. It would be nice to see a comparison between the Wacom and the other tablets though.

If you already have an ArtZ II, you can upgrade to the new pen for about \$70. Is it worth it? If you have an older pen (sans eraser), I'd say yes. If you already have an Erasing UltraPen, but not the DuoSwitch, don't bother unless you really, really, really need that extra button.

If you have one of the older Wacom tablets (the SD series), should you upgrade?

That all depends. If you find some of the new features useful, or you would like a better range of pressure sensitivity, it might be worth it. Enough time has passed that you can consider that you've gotten your money's worth out of the old one, and new tablets are a lot cheaper. If you are getting along fine with your old one, keep on using it, and be happy. But whatever you do, don't test drive a new model, or you might find yourself upgrading after all ... 

Wacom ArtPad II (4 by 5 inches)

Wacom ArtZ II Graphics Tablets

(6 by 8 inches, 12 by 12, 12 by 18, 18 by 25)

System requirements:

Macintosh or Macintosh compatible with

ADB or available serial port

System 6.0.4 or greater

(Not compatible with GeoModem software)

Disk space: approximately 900K

RAM: approximately 150K

Street price (mail order):

Wacom ArtPad II (4 by 5 inches) \$149.95

Wacom ArtZ II (6 by 8 inches) \$299.95

Wacom ArtZ II (12 by 12 inches) \$429.95

Wacom ArtZ II (12 by 18 inches) \$689.95

Wacom ArtZ II (18 by 25 inches) \$1,999

WACOM Technology Corporation

501 S.E. Columbia Shores Blvd., Suite 300
Vancouver, WA 98661

Phone: (800) 922-9348 (U.S. only), (360)
750-8882

Fax: (360) 750-8924

Web site: <http://www.wacom.com/>

BBS: (360) 750-0638 300 to 14,400 baud,
8 bits, no parity, 1 stop bit

Email:

support@wacom.com (tech support)

sales@wacom.com (sales)

Wacom also has offices in Germany, Japan,
and Korea. See its Web site for more info
mation.

Gary Gibson spends his time at work developing user interfaces for whichever company he happens to be working for at the moment. The rest of his time is split between family and friends, books, and his trusty Macintosh—in about that order. He can be reached on the Planet or at gmg@idiom.com.

Telecom



Mastering ISDN

A Book Review

by Tom Vernon

Not so many years ago, the joke among telecomm types was that the initials ISDN stood for "I Still Don't Network". A confusing array of standards combined with high costs and lack of consumer awareness kept the Integrated Services Digital Network waiting in the wings for many years. But recently, the "standards" have been standardized, costs have fallen, and telecomm companies are promoting their ISDN services through Web pages and other informational campaigns. The applications for a high speed digital network have flourished as well. Not surprisingly, a few non-technical books on ISDN have recently begun to appear on the shelves.

Mastering ISDN by Mike Sapien and Greg Piedmo is a practical guide to what can still be an intimidating technology. Users with a working knowledge of computers should be able to find all they need in this book's 580 pages to get connected and keep ahead of the learning curve.

This book is divided into four parts. The first introduces ISDN and gives some of its history. The origins go back to the early 80s, when service was first introduced in America by AT&T. The basic anatomy of ISDN is discussed: a basic ISDN link is made up of two 64-kbps B channels and one 16-kbps D channel. These building blocks may be divided or combined with additional ISDN lines in a variety of ways depending on the user's needs.

It is important to remember that ISDN is an international technology. In fact, Europe leads the United States in the number of connections. Germany alone has over one million Basic Rate ISDN installations, and better than two million B channel terminations thus far. This number exceeds the year 2000 projections for any Bell company or RBOC (Regional Bell Operating

Company). The authors conclude Part I with a progress report on ISDN implementation in other countries worldwide.

The second part of this book is a discussion of some ISDN applications. Authors Sapien and Piedmo have identified four growth areas for this technology: online information access, telecommuting, desktop videoconferencing, and remote LAN access.

For online users, the end of the line is approaching for speedier analog modems. Thirty-three thousand, six hundred bps is the theoretical maximum, with X2 being an interim offering of debatable utility. ISDN is the next logical step. Among its advantages over analog service are a reduced number of retries to connect, less waiting time for files, connect times of three to five seconds (rather than 30), and faster navigation through GUIs, all through a fully digital connection.

A telecommuting revolution is underway in America, with 40 to 43 million workers already laboring at home. While a growing number of these are self-employed, many continue to work for large corporations. Telecommuting often makes large demands for bandwidth, sometimes requiring simultaneous voice, fax and computer connections. Enabling these connections with analog technology would be expensive and cumbersome. ISDN can handle all of this and more with ease.

Telecommuting seems to be a win-win situation, with advantages to both employer and employee. For corporations, telecommuting empowers employees to work more effectively, it improves employee recruitment and retention, reduces costs by cutting demands on the physical plant, and facilitates partnership ventures without regard to location. Workers who participate in telecommuting programs can maintain a better balance between work and family obligations, enjoy a higher quality of life, and reduce or

eliminate commuting time. The authors conclude this section with some case stories of companies who have taken the plunge into telecommuting, offer some advice on how to develop a company policy on working at home, and discuss telecommuting design considerations, such as the arrangement of work space, the requirements for business and private phone lines, equipment needs, and company telecommuting policy.

ISDN is also an enabling technology in videoconferencing, an environment in which video and data can be shared between participating locations, interactively. Its high bandwidth and low cost are opening up markets beyond the corporate boardrooms. In many instances, the cost of a videoconference is less than that for bringing people together from diverse locations for a face-to-face meeting. Applications in business,

...you may need to install new wiring and jacks possibly separate from existing service. An NT1 device might need to be installed as well as terminal adapter equipment for your PCs....

industry, and education are described, and the workings of a typical videoconferencing system are detailed.

Related to telecommuting is RLA, or Remote LAN Access. RLA is the ability to log on to your company's LAN from a remote location. The requirements for RLA are more stringent than for telecommuting. Design considerations must include security, equipment standardization, and the configuration of user workstations.

Hopefully the first two sections of this book sold you on the virtues of ISDN, and you're now wondering: How do I get connected? Glad you asked, as that's the title of the third section of *Mastering ISDN*. The authors have thoughtfully provided worksheets with each chapter in Part III to help you organize the information you'll need to specify equipment and order ISDN service from the phone company. You begin by specifying which application you want, and work backwards from there, next selecting equipment and then ordering ISDN service.

Even though ISDN installations have become more standardized and simplified, there are still a lot of things you need to do on your end after ordering service. For example, you may need to install new wiring and jacks, possibly separate from existing service. An NT1 device might need to be installed, as well as terminal adapter equipment for your PCs. The remaining four chapters in Part III give specific recommendations on ISDN setup for each of the four growth areas mentioned in Part II.

Part IV of *Mastering ISDN* discusses issues and trends in the industry. The success of a company's foray into ISDN technology depends a great deal on the amount of user education, training, and other support that it provides to employees. During the early stages of the process, you'll come to rely on ISDN service centers for technical support and details about ISDN availability. These centers are available through several routes: your ISDN carrier, terminal adapter vendors or equipment manufacturers, systems integrators, and via Bellcore.

An advanced technology such as ISDN is not without a few drawbacks, and in the spirit of full disclosure, Sapien and Piedmo describe six of the biggest "gotcha's" of this digital service. Topping off the list is the beloved SPID, or Service Profile Identifier. This is a special number that is assigned to every B channel. Although its creators

...the ISDN terminal device
requires a source of AC
power. For some users, this
is a cause for concern, as
the loss of power equals
the loss of phone service...

thought that SPIDs would allow for increased flexibility, they seem to have added more confusion to the ordering process. The SPID situation is improving, as numbering standards are agreed upon, and terminal adapters move closer to being able to configure themselves.

Unlike POTS, which is a self-powered medium, the ISDN terminal device requires a source of AC power. For some users, this is a cause for concern, as the loss of power equals the loss of phone service. Responding to this need, many manufacturers of terminal adapters are designing backup battery functions into their new equipment.

If you live or work in an urban area, availability of ISDN service is usually a given. Many carriers or RBOCs quote 95% availability in most areas. ISDN is much more problematic in rural locations. It may not be available at all, or it may be provided only by "expanding" it to your home or business, sometimes at significant cost. Rural users may also experience significant delays between the time that ISDN service is ordered and when it is actually installed. In rare instances, such delays are measured in months! These problems are expected to diminish over time, as service providers extend coverage, and install equipment that provides extended ISDN technology.

There are proper and improper ways of utilizing ISDN service. New users may be overwhelmed with all the bandwidth and attempt to do too many things with it. An example that the authors cite is using the same line for voice/data and videoconferencing.

Finally, you must make sure that the equipment you purchase matches the application you have chosen. If you do not, you risk paying for more service than you need, or having equipment that lacks some essential functions you will require. The authors' three-step process of choosing an application, then selecting equipment, and lastly ordering service should keep you from getting into a pickle.

The final chapter of this book is where the authors gaze into the future and venture some predictions. They look at emerging trends for ISDN service in the United States, and posit that many of the "gotcha's" described earlier will either go away or be much less of a problem. International trends for ISDN are also discussed. Since a number of countries have deployed ISDN under a government-owned or subsidized phone company, worldwide demand is expected to be vigorous. Specific predictions for several parts of the world are given.

As ISDN becomes available globally and evolves into more of a plug-and-go medium, new applications will develop to take advantage of it. In telemedicine, videoconferencing may be a cost-effective means for patients to get a second opinion. In rural areas, it may be an effective way to reduce costs and improve health care.

Distance learning applications permit training, education and instruction from many remote sites. One example is Pacific Bell's use of ISDN for PC-based learning. Not only does the program provide multimedia-based instruction to employees, it also updates the human resources database files with information on the courses that each employee has taken, and grades received.

Many of the application, registration, and basic services administered by a government agency could be automated with ISDN, and expanded to 24-hour access. Examples include: driver's license applications, car registrations, voter registration, lottery network access, and public announcements.

Three appendices and a glossary round out *Mastering ISDN*. Appendix A lists contact information for ISDN carriers. Contact information for equipment vendors is contained in Appendix B. And Appendix C lists other types of ISDN resources, including Web pages, Users Groups, telecommuting and videoconferencing information, consultants, and more. The glossary of terms pro-

Finally, you must make sure that the equipment you purchase matches the application you have chosen. If you do not, you risk paying for more service than you need or having equipment that lacks some essential functions you will require.

Tom Vernon is a media consultant completing his Ph.D. on self-directed learning at the University of Pennsylvania in Philadelphia PA.

vides a place to go when you are confronted with acronyms or words that you do not understand.

Kudos to authors Mike Sapien and Greg Piedmo for writing a book that goes beyond the basic "ISDN for the technically challenged" concept. The work forms provide some organization and structure for setting up service for different applications. The applications sections are what add value to this book. While there are more than the four the authors describe, these constitute the point of interest for a majority of users. The sections and resources on telecommuting are especially well done. Anyone needing a solid introduction to the Integrated Services Digital Network would do well to read this book. 🐘

Mastering ISDN

by Mike Sapien and Greg Piedmo

580 pages

\$29.99

SYBEX Inc.

Reviewed by Tom Vernon

TLVernon@AOL.com

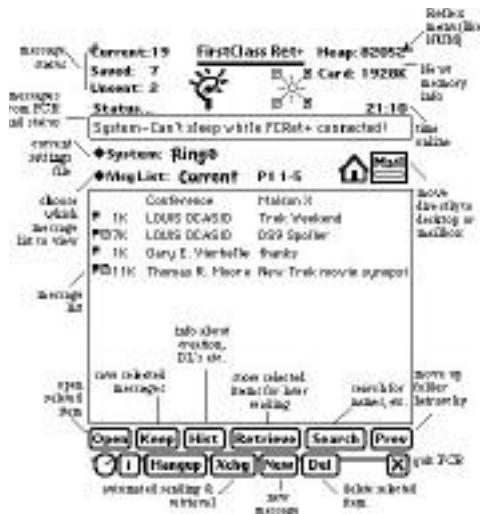
First Class Access to First Class

First Class Retriever

by Don Modesto

I felt charmed the first time I got on a First Class (FC) board with First Class Retriever+. You have your flags, attachments, senders, and message titles—everything right there, in miniature. Users of FC clients will find Retriever a generally intuitive Newt version of its Mac counterpart. While I have been using it, Retriever has been stable and easy to use.

You create settings files through the System pull-down menu (see illustration)



and choose whether you want to browse FC-style, or send Retriever to retrieve mail and upload messages composed offline, as with Bulk Rate (messages are only retrieved from your mailbox, though, and not conferences). Bettering First Class itself, Retriever's Keep button can save messages without opening them first. Unfortunately, there is no counterpart to Bulk Rate's "Don't read these conferences/messages from these people" feature.

As you begin browsing, Retriever starts you in your mailbox. Unread messages bear the familiar flags and double-tapping them opens/deflags them. A nice addition in a future version would be a way to deflag messages without opening them.

Getting to the desktop means tapping either the Home or the Previous buttons. Open a folder or message by selecting it and tapping Open or by double-tapping it. Folders take a while to open, so I got used to waiting, sometimes finding myself waiting for nothing as the Newt hadn't registered my double-tap. Slow, deliberate taps work better than quicker ones (Black Labs tells me that Apple now encourages developers to program for buttons rather than double-taps).

As Retriever allows offline composing, unsent messages are not kept in your mailbox (which vanishes upon disconnect). Instead, they have their own space along with Saved and Current messages. The dropdown menu to change/add destinations for outgoing messages is simplicity in itself.

Message windows offer File, Reply, and Forward buttons. File allows you to transfer a message's text to the Newt's Note application, like saving a message to disk in FC. Handy, obvious, and neglected in other Newt programs. The Notes button in the Unsent Message window allows you to append notes to your message, especially useful given how clunky the Newt's copy/paste function is. Retriever also takes up the slack of the Newt's shortcomings with a CleanUp button. Pen input—albeit vastly improved in Newton OS v. 2—is still clumsy. Words end up not only misspelled, but on wrong lines. CleanUp pulls stray words into neat sentences with blank lines creating new paragraphs.

While you can add or delete messages as you do with FC, Retriever has no way of creating or renaming aliases. If, like me, you save yourself digging through folder hierarchies by filling up your desktop with aliases, you will have to go in first with FC from your desktop and set it up for this.

Using Retriever, I referred often to the manual, which clearly explains the program's features. But it had no index—Arrgh! One also might look askance at the price of Retriever. I don't question the value of the program at all. The concepts are well executed, the coding is clean. I suffered no strange behavior or crashes with it and performance is snappy. But while Retriever offers the basic functionality of both FC and Bulk Rate, the combined cost of those for the user is \$25. How well will Mac folk take to spending four times that for the Newt version? I think, therefore, that while the average user would enjoy Retriever tremendously, as I do, Black Labs will find most of their customers to be business people using FC for internal messaging on company expense accounts.

For those willing to pay the \$100 (\$90 street), though, it's a great little application. It's a great little application.

Charming .

(BlackLabs says they intend to add Internet access, forms support, and downloading of attachments to future versions. At present, they are working on FirstClass VoiceLink which allows you to phone into your FirstClass mailbox and hear your message read to you.)

Pros

Provides both browsing and offline reading/composing; solid connections; "Retrieves" messages while online for offline reading; similar interface to First Class;

exports to Notes.

Cons

No “Open Unread,” “Next in thread,” or “Don’t read messages from—” features or deflagging without reading; no index in manual; no TCP access; pricey.

Ideal users

Business people using First Class for internal messaging. 

Price

¥15,200 in Tokyo; \$99.95 mail order from US.

Black Labs, Inc

250 Arapahoe Ave., Suite 205

Boulder, CO 80302

(303) 938-8580

Fax (303) 938-8546

sales@blacklabs.com

<http://www.blacklabs.com/blacklabs>

Microsoft Internet Explorer 3.0

It's Better, But...

by Dave Hedges

Microsoft has recently released its latest salvo in the rather tedious and annoying war of the Web browsers. Internet Explorer 3.0 for Mac is trying to unseat the Netscape behemoth. As of this writing it was available only for Power Macs due to its reliance on Apple's Code Fragment Manager 68K to make it run on 68000-series Macs. As soon as Apple can get that straightened out (by System 7.7, hopefully?), the browser will run on any Mac with an Internet connection and 4 megs of free RAM.

Four megs? Yes. Don't believe the line Netscape is trying to feed you—you don't need the 9 megabytes that Netscape Navigator takes. Internet Explorer 3.0 will run on a mere 4 megs of RAM for basic browsing. If you want the bells and whistles (Shockwave, Java applets, and other multimedia crash magnets of dubious value), IE will suck up more memory if it's available; but for the real work, 4 megs is all it takes.

For the real work, 4 megs is all it takes.

Internet Explorer, now available as Freeware, also uses less RAM because it doesn't do mail, it doesn't do news, and it doesn't do ftp. It farms these tasks out to helper applications (remember those?) so they can be done correctly. Netscape tries to do it all, and ends up doing it badly and taking up 9 megs.

Microsoft ships a mail and news reader along with IE, but you don't have to install or use it, and I never looked at it myself.

Another of Internet Explorer's benefits is that it doesn't seem to crash very often. Netscape crashes if you blink your eyes. I haven't seen IE crash once yet. (I use it on a Power Mac 7200/90 under System 7.5.5 and

Open Transport; your mileage may vary) The folks down at Netscape might want to wake up to the idea of software that does not crash, although they've been writing browsers for a couple of years now and seem completely disinterested in this idea.

Not too Microsoft

If you feel disinclined to use Internet Explorer because it's coming from Microsoft, think again. Microsoft has decid-

ed to build the Mac version of IE from the ground up. Unlike the achingly Windows-like Word 6, IE 3.0 is not "co-developed." The Windows version and the Mac version are completely separate. IE for the Mac was written at Microsoft's new Mac-only Internet software division, Microsoft Bay, which Bill has kindly stocked with Mac-faithful developers, some of whom have been writing groovy Mac stuff since the very beginning.

The overall interface is pretty much the same as Netscape's, although the obligatory top-of-the-window toolbars are more configurable, and in better ways. Instead of Netscape's annoying Directory buttons ("What's New?" "What's Cool?" "What's the Point?"), you get a row of buttons you can configure to link to any site you want. Visit Macintosh every day? Give it a button! This feature wins big points in my book. These links and the ones you store on a menu would be called "Bookmarks" in Netscape, but Microsoft calls them "Favorites."

The big loser here is ActiveX, which is Microsoft's vague umbrella term for a variety of ways to bring woe to your computer. ActiveX "controls" are Microsoft's answer to Java applets, and they're bad news. Why they're bad news is a complex issue I won't get into here, but suffice it to say that some German programmers wrote an ActiveX control that could siphon money from Quicken users' bank accounts without them knowing it. The best part is, they wrote this not to steal money, but to demonstrate what a sham ActiveX's pathetic "security" measures are! Fortunately, ActiveX can be disabled, and it probably won't come to much in the long run anyway. If you use IE, make sure you disable ActiveX.

ActiveX "controls" are
Microsoft's answer to
Java applets, and they're
bad news...

...suffice it to say that
some German program-
mers wrote an ActiveX
control that could siphon
money from Quicken
users' bank accounts
without them knowing it

The other big loser here is the error messages. Error messages are rarely helpful or well-written, but IE's are truly horrible for a number of reasons. Normally when you try to connect to a Web page and there's something wrong, the server at the other end of the line will give you a page which says something along the lines of "404-Error! The page you want could not be found!" If you're using IE in this situation, you get an error box saying "The attempt to load the page 'http://www.foo.com/foo-bar.html' failed." How informative. I have no idea that this is a server error. I have no idea that this is not an error related to my Mac. Internet Explorer has actually given me an error message that said "An error has occurred." That's it! Nothing more! Does this sound like good error message wording to you? As if to add insult to injury, these useless little error messages often come two or three in a batch, complete with little "previous" and "next" buttons in the error dialog! Fortunately, we don't have to pay for this kind of thing, as IE is free for the taking.

Worth a Test Run

Overall, bad error messages are far outweighed by the joys of a browser that doesn't crash more than once every couple of weeks and which runs in a reasonable RAM partition. The real bugaboo is ActiveX, and that can be disabled quite easily. Overall, I think Microsoft wins this time. And with the betas of Netscape 4.0 arriving and weighing in with 16-meg RAM requirements, I think IE 3.0 will be my browser of choice for a while. One can only hope against hope that the creeping featurism that turned trusty Word 4 into loathsome Word 6 will not make its next target Internet Explorer for the Macintosh. 

*Internet Explorer can be downloaded as Freeware at
<http://www.microsoft.com/msdownload/ieplatform/iemac.htm>*

Dave Hedges lives in a networked hollow tree at UC Santa Cruz, where he studies advanced procrastination. Email him on Planet BMUG or at fishboy@cats.ucsc.edu or check out <http://www2.ucsc.edu/~fishboy>.

ValueFax Fax Modem

Shareware for Macintosh

by Dave Carpenter

Okay, you've bought that lightning fast modem. Better yet, it's a fax modem. And your old fax software doesn't work any more. Or maybe you've upgraded to the latest System software, and your once-useful fax software is now a member non-gratis.

I know, I know, you've found some shareware products to be less than professional in content. But here is the answer to your fax dreams. A fax software product that meets all your basic fax needs, and for individual users, costs only a \$20 bill.

ValueFax has been years in development (or more correctly, in evolution). It has reached a level of sophistication now that it competed with many commercial products three times its cost.

Most fax programs make it difficult to fax because of poor interface design. ValueFax's interface is sparse, yet efficient. Only two dialog boxes that require your input appear from the time you initiate the fax until your fax starts transmitting. The Fax Printer dialog box allows you to choose quality (resolution); the range of pages to fax; whether to fax immediately or to spool the fax for transmission at a later time; the type of cover page; and allows you to choose the recipient of your fax from one or more fax phone books.

Installing ValueFax is straightforward. The compressed archive containing all the files needed is available at most of your shareware archive Web stops, including BMUG. Be sure to get the latest version (2.0.13, as of this writing), especially if you are a

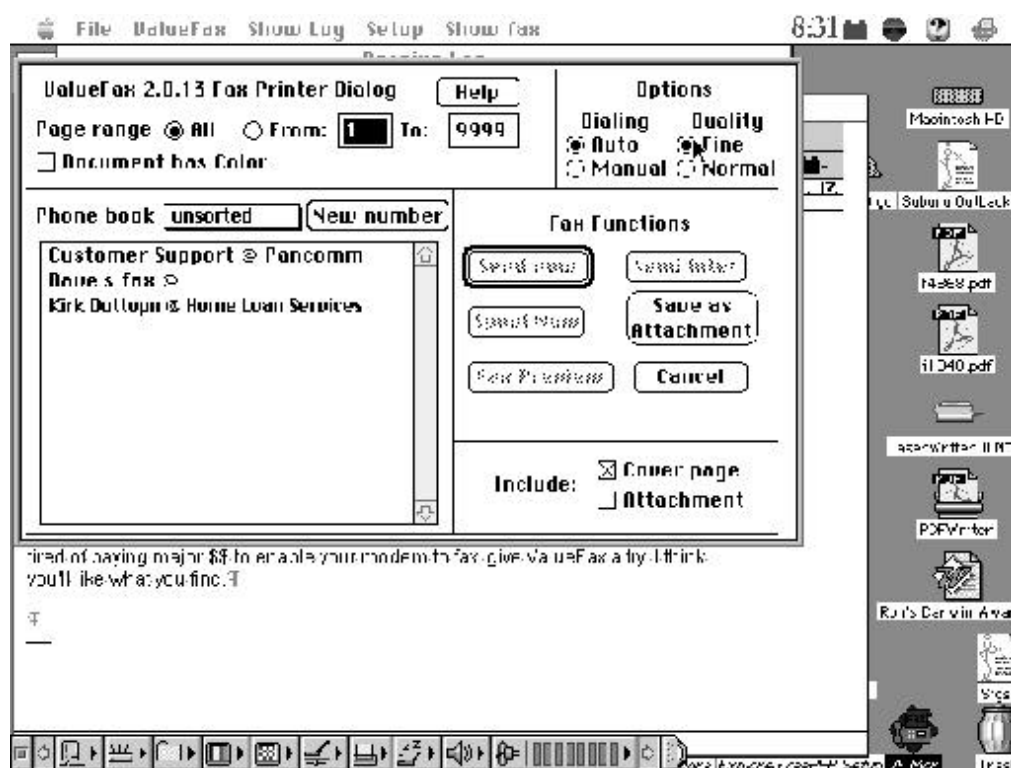
PowerBook user with a PCMCIA modem. Modem drivers that use the communications toolbox for class 1 and class 2 PCMCIA modems (included in only recent versions of the program) are essential for proper operation. Note that ValueFax won't work with the Apple Express modem or Geoport modem.

When installing, select the appropriate modem from the list in the installer program. Again, if you're a PowerBook user with a PC card modem, be sure to choose the appropriate PCMCIA modem driver, not the generic class 1 or class 2 modem driver (this is very important).

The ValueFax program consists of three elements. The Chooser extension, which loads into the Extensions folder in the System folder, makes faxing automatic by

simply holding down a key combination while choosing "Print" from within any application program. The FaxStatus application resides in the Apple menu and gives you immediate status of the modem and the fax software, as well as the ability to automatically send and receive faxes unattended. The core of ValueFax is the ValueFax Manager. This application program gives you access to all preferences and settings, all sent, received, and pending faxes, as well as the phone book that holds all of your destination fax phone numbers. In ValueFax Manager you may create a fax header (just a few lines) that is appended to every fax, or specify your own fax header page.

ValueFax operates in "evaluation" mode until you register and pay the shareware fee; you can send up to 20 faxes before the pro-



gram stops functioning. Registering your product gets you a “key” that gives you unlimited fax capability.

If you are not satisfied with fax software products you’ve come across, or you’re tired of paying major \$\$ to enable your modem to fax, give ValueFax a try. And if you’ve tried ValueFax in the past and weren’t happy, look again at the current version. A lot has changed. I think you’ll like what you find. 

Requires a Macintosh computer; class 1 or class 2 fax modem; hard disk drive recommended; System 7.0 or greater.

Pancomm Software
valuefax@netcom.com

The latest versions of the program are available at most Macintosh shareware sites including:
[ftp://ftp.netcom.com/pub/va/valuefax/an](ftp://ftp.netcom.com/pub/va/valuefax/)
[dhttp://hyperarchive.lcs.mit.edu/HyperA](http://hyperarchive.lcs.mit.edu/HyperArchive/Archive/comm/)
[rchive/Archive/comm/](http://hyperarchive.lcs.mit.edu/HyperArchive/Archive/comm/)

Individual Shareware fee: US \$20 (cash), \$23 (credit card). Site license fee is \$5.50 per Macintosh (\$100 minimum) which means 4 - 20 systems \$100 and \$110; 100 systems \$500 and \$550. 100+ systems priced on a case-by-case basis.

Dave Carpenter, a writer of all things hardware and soft, is trying to live an aleatory life. When he’s not writing, he’s providing voice-over narration for audio, video, and multimedia projects. You can reach him on Planet BMUG at David_C_Carpenter@BMUG.org.

David C. Carpenter
1217 Oak Creek Way
Sunnyvale, CA 94089
(408) 749-8217

Copyright 1994, David Carpenter.
This article may be used by any computer user group for publication in the group newsletter, if 1) the article is used in its entirety, including title, sidebars, and this copyright statement, 2) the article is not altered in any way, 3) a copy of the newsletter is sent to me at P.O. Box 475, Cupertino, CA 95015.

Language

BMUG Language Project Overview

by Megan Lynch

This is the third installment of the BMUG Language Project, and the last if no one wishes to take my place. I need to step down from the volunteer position of Language Project coordinator and editor to attend to some health problems. If you would like to take a turn, please contact Abby Andrews-Slonaker, BMUG's Publications Director. I think that it is important for BMUG to review language software because our society grows increasingly multicultural and multilingual. The Mac used to be the pre-eminent multilingual platform. Its hold on that title is no longer indisputable. I don't want the Mac to be left behind. If people don't know about the resources out there, it will be.

Let me tell you about our history and our future. I have studied five languages in my lifetime. I always wanted to be bilingual, multilingual if possible. To this day, I am not yet fluent in any of these second languages. Since graduating from college, I have had neither the time nor money to seriously pursue language study. Software programs for language learning are therefore very appealing to me because they allow so much flexibility and are relatively inexpensive.

The main problem I encountered in the search for language software programs was the dearth of programs for intermediate students of language as well as the industry focus on Romance languages. At the time I conceived of this project I was working in Macintosh retail. Because of all the negative press about Apple's problems, I found myself having to combat a number of myths about the platform. One of the reasons I took on this project was to show that there are more applications for the Macintosh than people think.

The goals that I set were to give more in-depth reviews, to make sure that the reviewer was as close in level to the target audience as possible and to review as many different products on the market for as many different languages as possible. I broadcast a call for reviewers first on the Planet, then on the Evangelist and other Internet resources. I then began combing the Macintosh Product Registry and other sources for developers of language-learning and language support software. I didn't realize how ambitious my project was until about one and a half months before the deadline for the first installment of the Language Project. What was slowing me down was finding the right reviewer to go with the right package. We would like to continue the project until we have made a good survey of what is out there, but we are having trouble involving responsible reviewers who will come through on deadline. I also had trouble obtaining participation from some developers. Consequently, this third installment of reviews is still not quite as I envisioned. 🦾

German Pronunciation Tutor

by Judith Bode

If, in fact, the best way to learn a language is to live in the target region and have to communicate there, then a tutorial that helps with pronunciation is very desirable, especially when students have limited access to the native environment. German Pronunciation Tutor (1990 version) is excellent and will be of greatest use to students during the first quarter or semester of their study; it can also be used to correct pronunciation or intonation errors at any level.

Pronunciation Tutor is a HyperCard program with more than two megs of generally high-quality voice reproduction by native speakers. The 11 topic areas include the alphabet, vowels, diphthongs and umlauts, familiar consonants, different consonants, special consonants, minimal pairs, numbers, cognates and stress, short reading practice sections, and telling time.

Within the alphabet section, students have the opportunity not only to hear and repeat the letters of the alphabet, but also to practice spelling the words they hear, including the names of 26 cities in Germany, Switzerland, and Austria. Unfortunately, the letters "w" and "b" are difficult to distinguish in this section, and this particular tutorial cannot be repeated immediately after the initial time. Instead, one must either select another tutorial and eventually return to this one, or exit and re-enter. In the section on familiar consonants, there is an error on the word list for "g". The verb "erfinden" is listed, which of course does not contain the "g" sound. The section on numbers is excellent; in addition to practicing what is there, students may type in any number between 1 and 999 and hear it pronounced. I recommend that they pay particular attention to pairs that sound similar, such as 13 and 30, 14 and 40, etc. The section on cognates and stress is somewhat less effective than the others due to a paucity of material. The section on time has a minor punctuation error in it, and the tutorial in general works best if one uses both hours and minutes on the 24-hour clock.

Naturally, there is no substitute for the native environment, and it is difficult to maintain the illusion of such in a language lab. Nevertheless, German Pronunciation Tutor is clearly useful, and I definitely recommend it and consider it a valuable addition to any language lab, particularly one without CD-ROM capability. The variety of topics is excellent, and students can certainly improve their accent, intonation, and sentence melody with early and diligent practice of this tutorial. It would also be very helpful for someone studying at home. ✖

French, Russian, Spanish, and Chinese versions of the Pronunciation Tutor are also available.

German Pronunciation Tutor

HyperGlott

P.O. Box 10746, Knoxville, Tennessee, 37939-0746

Phone: 1(800)-800-8270

System requirements: 1 meg of RAM for System 6 and 2 megs with System 7; HyperCard 2.0.2 or higher; and System 6.0.7 or higher.

Judith Bode is an educator at Grant McEwan Community College (Edmonton, Alberta, Canada). She earned her BA in German and Spanish from the University of Oregon, and has been teaching since 1974. For the past several years, she has also directed the multi-language lab at her college; during this time she has created a number of lab programs using various authoring packages. her particular interest is in computer assisted language acquisition.

The Rosetta Stone

Language Library:

Russian 1a

by Joseph Steven Coleman

I have always loved the romance of languages. My problem has always been leaving the “Romance” languages—those founded on the Latin alphabet and syntax. To overcome this problem, I tried studying Hindi, Chinese, and Arabic to get used to language without my ABCs. I’ve even tried to learn Russian before, but simply could not wrap my brain around the Cyrillic alphabet. The Rosetta Stone Language Library from Fairfield Language technologies makes it possible for a polyglot failure such as myself to wade into the waters of Russian almost painlessly.

Installation was easy—a floppy disk places the correct bits onto your hard disk. To run the program you must have the CD in the CD-ROM drive. You need a microphone plugged into your computer for the later lessons.

The approach is simple—full immersion in the new language. You do not get “translations” because translations are not part of learning the language. The words do not really mean something in English—the words are Russian and mean exactly

what they say in Russian. What Rosetta Stone offers is a chance to experience Russian as you will encounter it as spoken by people, not as divided into your little pocket dictionary.

Language conceptions are slightly different from English, and that difference is further served by the full-immersion method. From the first lesson you are learning a simple set of words and relationships. In a few minutes I was recognizing both the spoken and written forms of Russian words describing people, animals, things, and their relationships to each other.

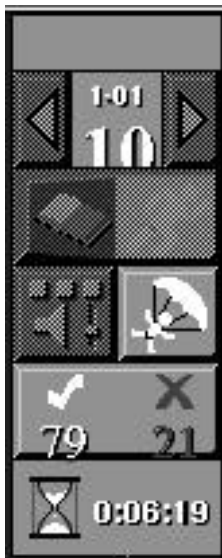
In a few minutes I was recognizing both the spoken and written forms of Russian...

The screen for the opening lessons consists of four pictures. A voice says a word and you choose the picture that corresponds to the word. If you make a mistake—no problem. The program is gentle, you can customize the sounds for correct and incorrect answers to your tastes, including no sound at all. When you make a mistake, make a new choice: thus even your mistakes can be used to learn.

As you move into the written lessons, you notice some of the differences between Romance languages and

Russian. There are letters that have no sound by themselves, but modify the hardness or softness of the consonant that follows. Conjunctions are not the same as in English, but casually shown as an integral part of the words themselves, with suffixes combined into the object nouns, to show their relationship to the subject of the sentence. A boy standing under a plane uses a different word to represent the plane than a boy standing on top of a plane or sitting inside a plane, but any of those three positions are still expressed with the same simple form of subject and a relative article.

Rosetta Stone avoids the heavy-handed metaphors of other language programs. The lessons fluid progress through a basic vocabulary to the noun forms, indication, and relation, and continue into lessons for typing answers or recording responses in Russian. The Cyrillic conversion for your keyboard is automatic within the program,



making your written lessons easier to accomplish.

The navigation bar is a fresh design, including a little figure using a parachute to “bail” from the current section of the program. I know it is minor, but I found it cute and intuitive—something I always look for in a new program.

In each section, Rosetta Stone provides feedback on your progress, starting with a little score box showing how many correct first choices you have made in that section. The combination of pictures, words, and recorded voices is used well, and each of those three elements can work upon different parts of your brain in understanding the new language.

This is a program that will reward you in direct proportion to the time you spend with it. I found the random jump from one section to another, repeating sections and being a good boy (following the lessons as the designers intended) all had benefits.

I’m not a Russian speaker, but I’m finding that I am becoming a Russian listener. I can pick out some of the meaning from the Moscow news broadcasts on the International Channel, even though I’ve only been playing with it for a few weeks. 

Rosetta Stone Language Library runs on both Macintosh and Windows Systems.

Macintosh Requirements: System 6.0.7 or later, CD-ROM drive required, 4 Megs of RAM and a Mac microphone for the advanced lessons.

Rosetta Stone Language Library is also available in Spanish, French, German, Dutch and English as a Second Language.

Fairfield Language Technologies
122 South Main Street - Suite 400
Harrisonburg, VA 22801 USA

Joseph Steven Coleman is a writer, director, and designer who lives in Oregon with far too many books. He has been a member of BMUG since 1989. There will be a brief pause for you to say “so what?”

Wenlin Software for Learning Chinese

by Steven Frus

Linguists will tell you that the Chinese language is grammatically simple but lexically complex. To the rest of us this means that Chinese grammar has comparatively few rules, but Chinese vocabulary has lots of words. The problem with Chinese words is... well... they're in Chinese. And the Chinese system for creating words is to make them out of pictures instead of sounds. This, in a nutshell, is the fundamental problem faced by the western student of the Chinese language. And it is for this fundamental problem that Wenlin software was created.

To one beginning to study Chinese it seems as if each of these characters were wholly unique, making their acquisition an almost insurmountable task. There are over three thousand commonly used Chinese characters, some dictionaries have over five or six thousand. How can anyone remember five or six thousand pictures? However, as the student of Chinese progresses, he or she learns that there is a method to this madness; there does exist some structure and logic to the way Chinese words are created and organized. Wenlin's key focus is to provide tools to organize and reveal the structure of Chinese characters.

A Brief Introduction

Let me just say one thing in the name of journalistic integrity before I go any farther. I have been good friends with Wenlin's creator, Tom Bishop, for over sixteen years. This is going to put me at a disadvantage in the credibility department. All I can say is that if I didn't like this software I wouldn't have reviewed it. I do have one advantage, and that is being able to

extensively interview Wenlin's creator at all hours of the night.

What Is Wenlin?

At Wenlin's core is an integrated dictionary/database and text editor. There are also flashcards, lots of public domain texts to read and study, and spoken pronunciations for each character.

Wenlin's Dictionary and Text Editor

Wenlin's dictionary is designed to capitalize on that feature which computers uniquely excel: their ability to instantly index and cross reference materials in ways that books or even elaborate filing systems can't.

Wenlin's dictionary has over three thousand characters and thirteen thousand compound words and phrases. Each one of these characters can be instantly accessed from the text editor. This is where the fun begins.

Say you are reading a copy of the Three Character Classic and you are stumped by the very first word. Just point your mouse at the first character and a brief definition will be displayed at the bottom of the screen (figure 1). If this terse definition is not enough, then clicking the pointer on the character will take the you to the full dictionary listing (figure 2).

Scrolling down the listing reveals Wenlin's real strength at cross referencing (figure 3). You can choose to list out all the characters containing the person character (figure 4), or all the phrases containing the person character (figure 5). You

can also search all of Wenlin's text files for instances of that character. Wenlin will show you how to correctly draw each character (figure 6) and how to pronounce it, with both a male and a female voice, as well.

Since every character in all of Wenlin's dictionary and text files are live you can let one association lead you to the next and then to the next if you like. It's a lot like surfing the Net only you are actually learning something instead of wasting time.

If you are not browsing one of Wenlin's electronic texts you can still look up words using Wenlin's Lookup feature. Typing in the pinyin romanization of the character's sound will bring up a menu of possible characters (one pinyin sound is shared by many different characters.) You may also type in English to get Chinese, but currently Wenlin's English-Chinese dictionary is a poor cousin to its rather rich Chinese-English one.

Wenlin also will make lists of characters by stroke count, radicals, frequency, and unicode number. These features offer pretty powerful support for tracking down hard to find char-



Figure 1



Figure 2

acters.

All of Wenlin's files, including its dictionary are user editable. You may add to them in any way and you can create files of your own. You can even grab them off the many Chinese



Figure 3

language newsgroups on the Internet.

Wenlin's text editor can read and write all commonly used Chinese language file formats, including Unicode, GB, and Big 5. (GB and Big 5 are used by Apple's Chinese Language Kit. Wenlin is one of the first



Figure 4

Chinese software programs to use Unicode, which is better than GB and Big 5, since it is a far more comprehensive international standard.)

Other Nice Features

Flashcards

Wenlin has a set of flashcards that allow you

to select the characters that you want to be tested on then very politely ask you if you've gotten the right answer. If you are a pathological cheater these might not teach you anything, but if you are honest then they offer another good tool to the student trying to build Chinese vocabulary.

Writing Characters with a Mouse

This feature lets you draw the character in, one stroke at a time. I didn't seem to have much luck with this one, though I saw it successfully demonstrated with my own eyes. One more reason to invest in a Wacom drawing pen, I guess.

No Chinese Language Kit Needed

You do not need Chinese Language Kit to run Wenlin. Wenlin is self-contained. This is a great thing for students who are on a tight budget, but it might frustrate someone who wants to print out fancy looking text. You get your choice of two Chinese fonts and one English font with no ability to add more or change any of them later. But Wenlin's text editor was designed as an educational tool, not to compete with powerful stand-alone multilingual word processors like Nisus.

My own pet peeve is that the English font does not have bold or italics. I think this feature would render certain files much more readable. Tom Bishop (Wenlin's creator) felt that there were other things that ranked higher on the list of educational importance that he was currently devoting his time to.

What It Is, What It Isn't

Wenlin is designed to be part of an overall learning environment. It is not designed as a stand-alone Chinese language lesson. Teachers of Chinese like this fact because they can flexibly adapt Wenlin to their own teaching style and content. However, the person who just wants to slap in a CD-ROM, relax, and get taught Chinese is going to be disappointed. Though Wenlin does have a large collection of Chinese literature, it does not have any lesson plans or any information on grammar or usage. Wenlin's design remains focused on vocabulary acquisition.

Late Breaking News

Tom informs me that he has signed an agreement with Professor John DeFrancis from the University of Hawaii, for the rights to his dictionary. This will add about 56,000 phrases to Wenlin's dictionary, bringing the total up to 70,000 phrases.

Niggling Nibbles of Negativism

Well, is there anything about Wenlin that I think has room for improvement? I do have some niggling complaints. As I have already mentioned, I wish that Wenlin had the ability to produce italics and boldface English text. In general I think that graphically, the pro-



Figure 5

gram could look a little spiffier, especially in this day and age of 3-D windows with drop shadows.

The text editor can be a little irksome if you are not used to it. Since clicking on a character normally brings up that character's dictionary reference, the way to highlight a character for cutting, copying or pasting is to hold down the Option key before clicking and dragging. Even though Wenlin's generous user's manual patiently explains this fact, I found it a tough habit to acquire. I thought that a toggle would solve this problem, but Tom said that the toggle was more confusing for some people.

The Wenlin Ahead

A major addition to the Wenlin of the future would be the inclusion of some lessons or even a textbook or two amongst the numerous other text files. This addition would really round out Wenlin's capabilities and make it a real powerhouse for Chinese learning.

Tom has indicated interest in an expanded Web site that would allow users themselves to

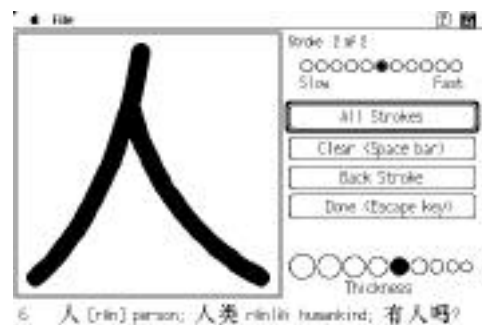


Figure 6

share Wenlin files with one another. In this way people with various areas of special focus could make additions to the dictionary to the benefit of everyone else.

Conclusion

What to do with “edutainmentware”?

In a world of content free edutainmentware, Wenlin really stands out as a learning software with unmatched power and flexibility. Its low cost and minimum system requirements make it an obvious choice for the beginning student of Chinese. Its extensive dictionary and expandability will benefit even skilled translators. Wenlin is a real winner. 🏆

Minimum System Requirements

Mac plus or above

CD-ROM drive

4 megs of memory installed (more for power Mac) Cost: \$150 for individual users, more for institutions available only through Wenlin institute

Wenlin Institute, Inc.

4405 Walnut St. Oakland, CA 94619, USA

Email: wenlin@wenlin.com

Web: <http://www.wenlin.com>

Telephone: (510) 534-1675

Steven Frus now sells himself in the MIS department of an all PC Clone environment in San Francisco's lonely financial zone. Inwardly, he still remains true the Macintosh cause and the BMUG spirit of giving away information. He can be reached at sfrus@slip.net or on the planet.

The Transparent Writer's Tool:

Review of Mariner Write 1.5.0

by C.R. Clowery

A friend who works at Apple related over the phone that he was moved and inspired by an in-house pep rally for the Apple Masters Program, hosted last April in Cupertino by Guy Kawasaki. On the stage next to Dr. Gil Amelio sat Nobel Prize winners, athletes, musicians, movie actors, writers of novels, science fiction, and screenplays, directors, movie stars, artists and celebrities, each of whom is also a Mac lover. The Masters in turn gave testimony to the power of the Macintosh to shape, capture, or even create the pictures and ideas they saw in their heads. One famous writer, Michael Crichton, told Dr. Amelio, "I can't really explain it to you, but when I sit in front of the Windows machine, I can't write. When I sit in front of my Mac, I can write." Crichton's Mac is essential to his creativity. The Brand-X computer, with its less-than-intuitive interface, stifled his muse and forced him out of his creative flow. What does that have to do with

Mariner Write, you ask? Mariner Write's concept and implementation, like the Macintosh, complements how we think and create.

The more I use Mariner Write the more it seems to go transparent. It becomes pencil-like, effortlessly facilitating the uninterrupted linking of creative ideas. One aspect of genius in the Macintosh concept is the realization, in a personal computer, of the image-making function of the mind's eye. The Mac's Graphical User Interface, the Finder and the Desktop show us pictures that signify to the design-making, connecting, holistic, networking mind. Pictures and connections bypass the "nagging critic," the filtering, analytical brain and allow creativity to make meaning of pictures and words on the computer as well as referencing the analytical side. When the Mac works at its best, it disappears. That same vanishing act happens often now as I create text with Mariner Write.

Did We Say Fast?

This phenomenon I suspect is partly a function of two things you appreciate first about Mariner Write ("MW"): its nimble speed and thoughtful features. I tested the speed of the latest release, Mariner Write 1.4.5, against its pre-release beta brother, Mariner Write 1.5.0. On my PowerBook 520, I squeezed Mariner Write 1.4.5's memory to the minimum and it flashed open, with cursor waiting on an open document, in slightly under ten seconds. I upped the memory to the standard 900K, clicked the icon and it was noticeably slower: a sultry twelve seconds. I performed the same test on a PowerMac 8500, and upped the memory requirement. With the large dictionary installed, MW 1.4.5 took nine seconds, and MW 1.5.0 popped up in eight seconds! None of your pokey Word 6 bloat on this tight ship, no sir! This means that Mariner Write runs fine on an SE, Classic, PB 100, or other 68000-based Mac, although to use its bundled MacLink Plus translators requires a minimum 68020 processor.

Mariner Write 1.4.5: Thoughtful Features

Helping itself disappear, Mariner Write lets you fine-tune your favorite writing environment as ordinary paper never could. You can open multiple windows and tile them up or down or stack them sideways. You can cascade windows or choose seven preset degrees of magnification, from 400% to thumbnails. Tool ribbon and ruler controls are built into the document window and you can access styles from the bottom of each window. You can color text or the writing window to a soothing hue.

With some exceptions, Mariner Write's feature set delivers tools more powerful



Mariner Write™

Version 1.5.0

<http://www.MarinerSoft.com>
email: MARINER1@aol.com
(502) 222-6695
(502) 222-8283 fax

Copyright © 1995-97 Mariner Software Inc. All Rights Reserved.
MacLinkPlus™ Mariner © DataViz®, Inc. 1995
Portions Copyright © Datapak Software Inc.



and more useful than Claris Works' ("CW") word processor module. Compare MW's four kinds of window adjustments to CW's two; five kinds of underlines instead of two; three kinds of color options instead of one; and in-line Chinese and Japanese input instead of text-window input. Mariner Write lists recently opened documents in the File menu; Claris Works doesn't. Mariner Write learned from NisusWriter about non-contiguous selection, and multiple (up to ten actions) levels of undo. Claris again falls short. Mariner Write lets you kern text, and offers three choices of bullet placement. Another unique preference is the ability to set the ruler's zero mark at the edge of the paper or at the print edge, i.e., following the left margin. No other processor I know does that. Mariner Write lacks an outliner, and mail merge and the style-sheets are not as robust as Claris's palette. You'll also currently have to do without tables, and bookmarks but Mariner more than makes up for the lack with the blessings of speed and stability, virtues that you appreciate in every writing task.

Dynamic Scrolling

Some features are innovations. For instance, if you drag the handle in the scroll bar in your current word processor, you drag blindly, wait for the window to catch up and guess where you should stop.

In Mariner Write you drag the scroll bar handle and you see your pages move along in tandem. You know exactly where you are. Pull it faster and the scrolling accelerates. This feature helps you survey large documents precisely and quickly. I only know of one other program, a text editor (BBEdit), that can do this; now I don't know how I got along without this feature.

There are many thoughtful touches that could come only from someone who writes on his or her Mac and who found a better way to do it. For instance, the underline style gives you full underline, word by word underline, dotted underline, double underline, and overline. You can color text, color the background of the page or color invisible text and symbols. You get to insert graphics (PICT, EPS, GIF, and JPEG formats) as objects or as characters in-line, scale them, or leave picture place holders to speed up screen redraws.

Asian Languages Enabled

A feature I appreciated immediately was Mariner Write's WorldScript Asian language sensitivity. It handles Chinese characters or Japanese Kanji gracefully. In fact, an early version of Mariner Write is distributed in Japan as Pascal Write. (www.pascal.co.jp/)

With the bundled AppleScript commands you can clean up Internet email or www documents. You can assign keyboard commands to any function. While you can't find and replace styles, Mariner Write allows you to find and replace fonts, something that I do at least once per project. PowerBook users get an option to display bigger cursors and minimize disk access, thus saving the battery. Apple Drag and Drop lets you use the desktop for repeated quotes or boilerplate text, and Smart Edit inserts spaces before words or sentences that you drag and drop. And happily, the print preview window is big enough to actually check your document.

A resoundingly cool time-saver is the choice to collate copies in the printing option dialogue box. That means no matter how many copies of a document you are printing, you receive the pages of each version already collated in order. Mariner Write will print a document through from first to last, instead of delivering all copies of each page bundled together. Yes!



More Stuff in Mariner Write Version 1.5.0

The first U.S. release, 1.3, was well-received in the commercial computer press. Some reviewers paradoxically dinged Mariner Write's lack of features while praising its sleek size. It's easy to acknowledge the trade-off of convenience versus power: the more functions, the slower the gadget works. Having seen the criticisms of Version 1.3, I watched with interest Mariner Software's update. It seems they

listened carefully to feedback and then threaded the needle: Version 1.4.5 added the most requested features but implemented them intelligently and still fit them into a low-fat diet. Version 1.4.5 robustly implemented end-notes, multiple headers and footers. I tested a beta version of the new MW 1.5.0 upgrade. Mariner has added features that users of 1.4.5 requested and it added half a megabyte to Mariner's size to do it.



The Laundry List

Paragraph bullets have been implemented, and frames for pages or paragraphs that allow colors and nine options. Now you can insert a horizontal rule, or apply background text color, which surrounds only the text with color, not the page you write on. There is a handy vertical command bar option, indent in and out buttons on the tool bar, background pagination, half a dozen improvements to the Spell Checker Tool, and a new tabbed folder format for preferences. Footers have been robustly implemented to allow separate main, first page, right, and left headers and footers.

Version 1.5.0 adds a checkbox to the Save As dialog to bypass Mac Easy Open translators, which speeds performance when a large number of translators are installed.



They added a variety of options to the line numbers, and the frame command allows you to specify how much extra space goes around graphics.

The 1.5.0 upgrade's standard is consistent with the quality of Mariner 1.4.5. In the future I would enjoy sound—the ability to hear as well as see my text. A Plain Text button on the command bar would be handy.

Why the Name Mariner Write?

Bill Parr, author of Mariner Write, dedicated the program to honor his father, who was a boatwright, and who designed computers for the Mariner Space Probe, hence the name. Bill dedicated the cover of the manual to his wife. Mariner Write is so easy to use and intuitive that the well-written manual is nearly superfluous. All the same it contains flashes of humor as it instructs.

How often is the spark of inspiration snuffed while waiting for a bloated Office Suite word processor to lurch into readiness? The high-end processors that include the kitchen sink are four times bigger than Mariner. I now understand and use all the technologies that Mariner Write offers and the ones I don't need, like bundled clip art, or "wizards" are not there taking up space. Mariner Write's blazing speed, six-seconds to cursor-at-the-ready and waiting to image your ideas, suits my idea of a sharp tool. I nominate Mariner Write for BMUG Choice Product! 

System Requirements:

68020 or later processor

Memory: 1250K for Macintosh and 1850k for Power Macintosh.

System 7.0 or later, a hard disk, and a floppy disk drive.

Mariner Software Inc.

of LaGrange, Ky.,

can be reached at

(502) 222 6695; fax (502) 222-8283;

mariner1@aol.com;

<http://www.marinersoft.com>.

Price: The software lists standard retail price at \$69.95, but it's available to members of Mac user groups, subscribers to Apple's MacWay mailing list, students, educators, and owners of competitive Mac word processors for \$49.99. Educational institutions should inquire about bulk dis-

counts from Mariner Software.

C.R. Clowery has used and reviewed Asian Language Software (including Chinese Talk II) on the Macintosh since 1990. He has also published reviews in the Washington Apple Pi Newsletter.

Mac Home Journal, Online Edition, May, 1997;

MacUser and Mac World, Feb. 1997;

MacAddict #5, MacWeek, October 28, 1996.

WIE SAGT MAN...? (HOW DO YOU SAY...?)

by Judith Bode

In an earlier review I commented that as children, we learn a language more by osmosis than by dint of hard work; as adults, it is just the opposite, in that we require a more structured approach to language acquisition and communication. Somewhere along the line in our childhood, as we made the transition to an awareness of the framework of language, we enjoyed playing the game of Hangman. Beyond checking spelling, this game instilled in us, quite without an awareness of the process, the notion that combinations of sounds and letters are the fundamental building blocks of a language. It trained our eye and ear to decode language according to logical, recurring patterns.

The program, *Wie Sagt Man...?* (1994 version), is a sentence translation game similar to Hangman; it emphasizes the structure of sentences, rewards good spelling, and fosters intuitive cognitive skills. It comes with 23 sets of ten sentences, each sentence containing a maximum of four lines of 25 characters. Each of the sets is arranged by grammatical topic such as adjective endings, various classes of nouns, dative verbs, weak or strong verbs, subordinating conjunctions, modals, subjunctive, all types of prepositions, and *da/wo* compounds.

Running the program is very easy. The student first selects a unit from the menu (which I, as their teacher, have modified to show the grammatical topics), and then normally a direction, translating either from German to English or English to German. I have disabled the German to English option on our copy, as I prefer that students exercise their newly-acquired German at this point. Next the student selects one of three levels of difficulty. In level one, each letter is represented by one

Students have a way of
memorizing the exam
ples in programs like
these, and if the
instructor has time to
develop additional sets of
sentences, it will enhance
the value and life
of the program.

dash, and multiple occurrences of a letter are printed automatically when the student types that letter. The *ss* (ß) is given to the student as a free letter. In level two, each letter is again represented by a single dash, but multiple occurrences are not displayed automatically; rather, they must be typed each time. In level three, only the punctuation marks are given; there are no dashes to indicate the number of letters in the words. Throughout, there is a penalty for requesting a letter more times than it occurs, and with five wrong letters the student loses the game. Students are encouraged not only to learn the required vocabulary and structures, but to develop their intuition vis-a-

vis spelling rules in German in order to challenge themselves at level three.

The intent of the existing database in *Wie Sagt Man...?* is commendable, but the complexity of the sentences and their grammatical structures leads the student quite naturally to alternative answers, which cannot be rewarded within the parameters of the program. Because no provision exists for the computer to accept a variety of translations for a given sentence, the program should be limited by the instructor to short and relatively simple situations. It then becomes ideal for junior high and early high school students and can also be used as an adjunct to the early stages of adult language learning. To offset the limitation in answers, the producers encourage the instructor to edit the easily modifiable database and develop unlimited sets of new sentences to suit his or her curriculum.

The developers at Lingo Fun Inc. have produced some fine workhorse programs for practicing languages, and this one certainly has its place in the language lab. The program is easily used by students and easily modified by instructors. The instructions and pathways are clear, and the program is trouble-free. As long as the instructor understands the limitations and takes the time to examine and edit the topics so that the structures and vocabulary used dovetail with their courses, it will be a useful program. Students have a way of memorizing the examples in programs like these, and if an instructor has time to develop additional sets of sentences, it will enhance the value and life of the program. There is no aural/oral component to *Wie Sagt Man...?*, and therefore it would be best to have it as one of many applications available to students in the language lab.

The original program was copyrighted by Lingo Fun, Inc. and is available from several sources including the two listed below. Prices vary, depending on the supplier and whether one is ordering in Canada or the US (approximately \$60 CDN and \$40 US). In addition to German, the series is produced for French and Spanish, which we are also running, as well as Italian and Latin. Lingo Fun 

P.O. Box 486
Westerville, Ohio
USA 43081
(800)-745-8258),
Tralco
297 Brucedale Ave. East,
Hamilton, Ontario
Canada L9A 1R2
(800) 637-5943).

Requirements: Apple II or better, or Macintosh.

The program recommends 384 K of space; the application itself is 251 K. The program is currently installed at our site on Mac LC 520s with System 7.1.

Judith Bode is an educator at Grant McEwan Community College (Edmonton, Alberta, Canada). She earned her BA in German and Spanish from the University of Oregon, and has been teaching since 1974. For the past several years, she has also directed the multi-language lab at her college; during this time she has created a number of lab programs using various authoring packages. her particular interest is in computer assisted language acquisition.

Electronic Traitors

Globalink's Language Translation Programs

by Paul Attinello

Traduttore, traditore: the old Italian proverb is ruthlessly accurate — the translator is always a traitor. But beside the innate difficulties of translation from one language to another, many have claimed that the interfaces between languages are so intricate and somehow inef-fable that they cannot be negotiated by 'mere machines.' Indeed, skeptics point out that computers can't really understand one language, let alone translate from one to another.

However, those of us who do academic work that involves reading in a number of (half-known, briefly studied) languages know that the most tedious work of translation isn't the final editing, or the working through of the real meaning of a passage — it's simply looking up word after word, hacking one's way with a dictionary through sentences that one almost understands without it. This would be the kind of work that would be perfect for computers: why not just have your Mac look up all the words, and then you can puzzle out the exact meaning? Globalink's language trans-

lation programs, currently designed at three levels of sophistication in versions for four or five languages, attempt to do exactly this.

All of Globalink's programs are aimed at a business market, and the documentation uses basic business and personal letters as samples with some ventures into technical language. This obviously makes sense from the stance of choosing the market with the most money in it; but I question whether it is smart to completely ignore the academic/literary market. However, it would probably be as difficult to change Globalink's policy of market targeting as it would be to change its policy of ignoring Macintosh-oriented upgrades.

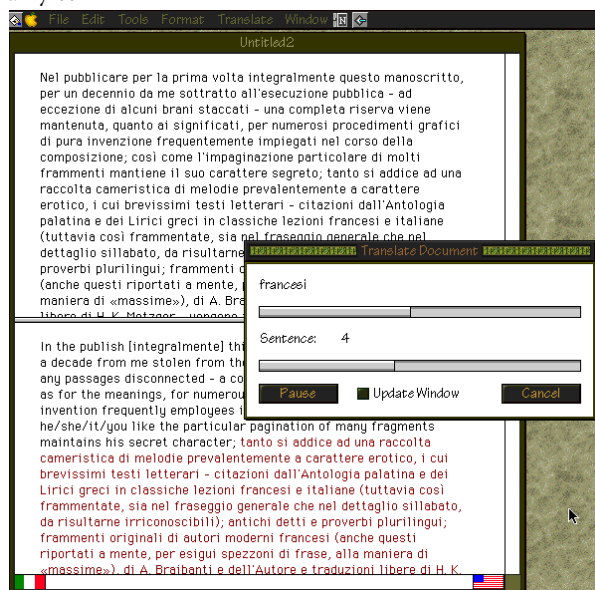
Language Assistant Series

The Language Assistant programs are Globalink's "junior" translation programs, with smaller dictionaries but acceptable design. Each program, including Help and Sample Document files, is between 5 and 6 megs in size, which makes them fairly convenient for the standard hard drive. The interface is

neat and quite simple, consisting of a single bifurcated screen (see illustration) with a few commands available through menus. The location of the flags shows which direction you're going; the default is always from English to the foreign language (and that default can't be changed, which is mildly annoying for someone who is always translating in the other direction). Typing text in the upper screen produces the same text in the lower screen; one then chooses whether to translate the entire document, or a sentence or a word at a time, and the translation replaces the original text in the lower screen. One peculiar annoyance was that the copy and paste keyboard commands seldom work the first time one hits the keys, and not always the second time. I'm not sure why this was happening, but it was a definite and constant irritation.

All of the Language Assistant programs were originally designed and sold by Microtac Software, formerly in San Diego.

The location of the flags shows which direction you're going; the default is always from English to the foreign language (and that default can't be changed, which is mildly annoying for someone who is always translating in the other direction).



FRENCH

<i>French Original</i>	<i>Output: French Assistant</i>	<i>Output: French Power Translator</i>	<i>Translation 'By Hand'</i>
Où est la plume de ma tante?	Where the feather of my aunt is?	Where is the feather of my aunt?	Where is my aunt's pen?
J'ai embrassé l'aube d'été. [Rimbaud]	I kissed the summer dawn.	J have kissed l dawn d Summer.	I embraced the summer dawn.
Là, tout n'est qu'ordre et beauté, Luxe, calme et volupté. [Baudelaire]	There, all is only order and beauty, Luxury, quietness and [volupté].	There, whole n is @@qu order and beauty, Luxury, calm and pleasure.	There, all is order and beauty, Luxury, calm and voluptuousness.
Quel est le propre du mythe? C'est de transformer un sens en forme. [Barthes]	What the own of myth is? It is of transforming a feels in forms.	What is the clean of the myth? C is to transform a senses in form.	What is characteristic of myth? It is to transform a meaning into form.
Marie avait débuté les représentations de sa pièce lorsque j'étais au Mexique, dès mon retour la rumeur m'avertit que c'était un désastre. [Guibert]	Marie had started the representations of his piece when I was in Mexico, since my return the rumor warned me that it was a disaster.	Marries had begun the @@representations of its coin j was to Mexico, from my return the rumor m warns that c was a disaster.	Marie had begun production of her new play while I was in Mexico, and as soon as I got back rumors warned me that it was a disaster.
Il est alors en avance, de son nom, sur lui-même. À cette avance que lui fait la langue, aura-t-il gagné? [Derrida]	He is then early, of his name, on himself. To this advance that does he make the language, will he have earned?	It is then in advance, its name, on himself. To this advance that makes it the language, will have-it earned?	He is thus, by his name, in advance of himself. Will he have gained from this advance that language gives him?

GERMAN

<i>German Original</i>	<i>Output: German Assistant</i>	<i>Output: German Power Translator</i>	<i>Translation 'By Hand'</i>
Wieviel kostet das?	Does how much cost the?	How much does this cost?	How much does that cost?
Mit 1,3 Millionen Einwohnern ist München heute die drittgrößte deutsche Stadt (Bild links).	With 1.3 millions inhabitants Munich is today the third-biggest German city (picture on the left).	With 1.3 millions inhabitants is Munich today the @drittgrößte German city (picture on the left).	With 1.3 million inhabitants, Munich is today the third largest German city (picture at left).
Wer, wenn ich schrie, hörte mich denn aus der Engel Ordnungen? [Rilke]	Who, if did I scream, did I hear because out of the angels orders?	Who, if I screamed, heard me for from the angel orders?	Who, if I cried out, would hear me among the angels' hierarchies?
Es war einmal ein Mädchen, dem starb Vater und Mutter, als es noch ein kleines Kind war. [Grimm]	It was once a girl, that died father and mother, as it was one more little child.	It was once a girl, that died father and mother, as it was still a small child.	Once upon a time there was a maiden whose mother and father died when she was just a little child.
Du müßtest dich schon rasieren – meine Eltern kommen vom Land, die verstehen nicht viel von der Erotik eines Drei-Tage-Bartes. [König]	You had to already shave yourself- my parents come of the land, that doesn't understand many of the eroticism one day.	You would have to shave already-my parents come from the country, them do not \ understand much from the @@Erotik a Three-days-beard.	You would have to shave – my parents come from the country, they don't quite understand the eroticism of a three-day beard.
Die Einzigkeit des Kunstwerks ist identisch mit seinem Eingebettetsein in den Zusammenhang der Tradition. [Benjamin]	The only-ness of the [Kunstwerks] is with his identical embedded-in into the connection of the tradition.	The @@Einzigkeit of the work of art is identically with his @@Eingebettetsein in the connection of the tradition.	The uniqueness of a work of art is inseparable from its being imbedded in the context of tradition.

ITALIAN

<i>Italian Original</i>	<i>Output: Italian Assistant</i>	<i>Translation 'By Hand'</i>
Dolce e chiara è la notte e senza vento. [Leopardi]	Sweet and clear it is the night and without wind.	Sweet and clear is the night and without wind.
Sin da fanciullo Michelangelo Buonarroti mostrò precoci tendenze artistiche.	He/she/it/you since little boy Michelangelo Buonarroti showed precocious artistic tendencies.	Since he was a little boy, Michelango Buonarroti showed precocious artistic tendencies.
L'emigrazione italiana di massa ebbe inizio dopo l'unificazione del paese, completata nel 1870 con la presa di Roma.	The Italian emigration of mass had beginning after the unification of the country, completed in the 1870 with the taking from Rome.	Italian mass imigration had its beginning after the unification of the country, completed in 1870 with the conquest of Rome.
Nel mezzo del cammin di nostra vita mi ritrovi per una selva oscura che la diritta via era smarrita. [Dante]	I in the half of the [cammin] of our life found for a dark forest that the right by he/she/it/you had lost.	In the middle of the journey of our life I came to myself in a dark forest where the straight way was lost.
Come a dire che il libro stampato è una serie di indizi per la riconquista di una calligrafia scomparsa. [Eco]	Like to tell that the printed book is a series of signs for the [riconquista] of a disappeared calligraphy.	As if to say that the printed book is a series of signs for the reconquest of a vanished calligraphy.

This company is now out of business, and Microtac's "version 1.0" is sold as Globalink's "version 1.01" with no evident changes. It's hard to guess what Globalink will do with these products, and perhaps they were purchased merely in order to wipe out a competitor in the small field of translation software. However, as I hope to show, these programs remain worthwhile in their own right.

Power Translator Series

The Power Translator programs have even simpler screen interfaces (see screen shot). A given package consists of separate applications for the two directions in which translation can occur. For example, the German version of Power Translator actually consists of two applications, Power Translator GE (meaning German to English) and Power Translator EG (yes, you guessed it – English to German). This was not a problem for me, as I rarely wanted to go in two directions in one document. It might even be one way of handling the most difficult aspect of these programs, which is their size; the much larger dictionaries mean that, for instance, the German program installs 36 megs of files, and a minimal version still needs 31 megs. This space is taken up by the two translating programs and by a file of "Dictionaries;" there are 62 in the German version, all incomprehensibly named separate files.

This will immediately suggest two things about this program which turn out to be pretty accurate: (a) it's complex and sophisticated and (b) it's originally conceived for PC users, and isn't changed much for the Macintosh. Generally, the Power Translator programs are fairly clear at the level of translation, but step down to the process of entering new words into the dictionary and you fall into a tangle of nonintuitive codes. Even the technique of marking words not found in the dictionary with "@@" seems inelegant and unpleasantly DOS-like; surely they could find a better solution for the Macintosh, given the range of available fonts, colors and dingbats. Again, the copy/paste keyboard commands seldom worked the first time; as this problem hasn't happened in any other program on my Mac, I must assume that it is a common bug in all these programs.

One of the techniques I use in judging a new piece of software is to figure out what

(a) it's complex and sophisticated and (b) it's originally conceived for PC users, and isn't changed much for the Macintosh.

aspects of the program seem the most bogus – that is to say, what functions or modules of the program only pretend to work. You might think of this in terms of Dilbert's boss and his approach to software design: what was installed in the program just so it could be listed on the box? The entire speech module of Power Translator is definitely a Dilbert's-boss function. It involves only the standard Apple system software of MacInTalk, and enables the program to read only the English text. This is obviously pointless for an English-speaking user; and (as we know from Nisus Writer's ability to read text in several languages) it is an unnecessary limitation to boot.

Testing the Programs

Frost – "Poetry is what is lost in translation."

My test of the programs was oriented towards the literary and the academic. As anyone who has had to read Adorno in the original knows, there is a wide difference among styles in foreign languages: when the grammar is unfamiliar, even a translation of every single word can still make no sense at all. So I gave the programs different kinds of sentences to translate, from simple declarative sentences (the kind you might face in a language class in the third week) to various kinds of more difficult sentences: idioms, slang, intricate pronoun references, poetic or scholarly language, or (most difficult of all) humor. As you might think, the programs were often baffled by the more difficult sentences. They were also beaten by many of the prepositions – understandable since prepositions seldom map one-to-

one in translation.

In all of these programs, the programmers (appropriately) expect the user to edit the output, sometimes quite a lot. In some cases, it is possible to get from the raw output to an accurate translation by employing a few relatively simple steps; if that is not possible, the program is not worth using. The most awkward aspect of text entry in all of these programs is that any change to the original makes the program untranslate text it has already translated. If you have the program translate a lengthy sentence, then you laboriously correct and rewrite it until it makes sense, and then notice any errors in the original – if you make any changes, all of your work is thrown away.

Another awkwardness is the handling of punctuation. Spaces, quotation marks, periods, commas – all get treated rather strangely in all of these programs, and all need to be corrected in the final version. It is risky to take a translation and dump it into another document, as there will be spaces before commas and other unexpected glitches.

French Translator

On the one hand, translating French shouldn't be terribly difficult for a computer; there are few word inflections and a relatively small vocabulary (the smallest among major Western languages). On the other hand, grammar and word order can be subtle and complex to the point where no computer could get the hang of it, so you might expect a computer to come up with clumsy but basically coherent sentences. And that is true, for the most part, with French Assistant; the only major glitch is a problem with word order, where the verbs keep landing at the end of a translated sentence. (Perhaps a German programmer wrote the code...)

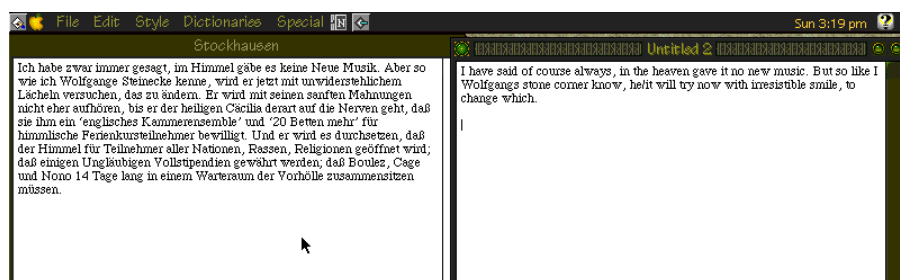
Of the five programs reviewed here, French Power Translator had the most serious problems. For some reason, contractions aren't translated at all, and aren't marked – what kind of program turns "J'ai faim" into "I have hungry?" And it seems ridiculous that words in the French Assistant dictionary aren't included in the much larger program. In fact, this is the only one of the Globalink programs that I have deleted from my hard drive as useless.

Fortunately, French Assistant is helpful enough for simpler texts, and almost man-

aged to make sense of Derrida's intricate pronoun references. It's also great for translating surrealist poetry, as the computer isn't fazed by nonsensical connections; it just translates the words one by one.

German Translator

Translating German requires an enormous amount of patience from the programmers. A huge vocabulary and many inflections create, in effect, a set of intricate puzzles, one for each part of speech. However, one helpful aspect of German is the extremely straightforward usage: sentences tend to say exactly what they mean, and distinctions in nouns and verbs are almost always perfectly clear (more so, for



instance, than in English).

Both German programs worked well – and both took up more room than the other language versions. All of the programs allow you to work through a text word by word, selecting the more sensible choices – which would allow you to fix the problem in the German Assistant's translation of the first sentence, as you could tell it to translate “das” as “that” rather than as an article. It is a surprise that, again, the Power Translator program didn't know words that were no problem for the Assistant program (why doesn't it understand an important word like “Erotik?”). Both programs need to learn that “Es war einmal” always translates “Once upon a time.” The difficulty with the Benjamin quote is unfortunate, as German abounds in gerund constructions; however, at least from the Assistant output, one can almost figure out the point of the translated sentence.

Italian Translator

Globalink only has an Assistant Program for Italian—not really a hardship, as the Power Translator programs are mostly disappointing. Fortunately, this lan-

guage is ideal for computer translation, as it has a large vocabulary but very few inflections and straightforward usage and word order. Of course, in Italian, dialects are a problem – perhaps the only solution is to have an enormous database with words from all the dialects, if that were possible. Italian Assistant only had real trouble with idiomatic phrases, which are unfortunately common in Italian; otherwise I was able to negotiate whole paragraphs with this program which is great because, despite my last name, I never learned Italian. Ah, the tragedies of naturalization....

More Things You Can't Have

Borges – “The original is unfaithful to the

translation.”

The company's response to the above complaints is: hey, everything is fixed on the Windows versions, and we also have better and more expensive programs. The salesperson at Globalink said that the Power Translator versions for Windows were now at 6.0, and were much better than the v.2.0 that was the top version for the Mac. Then there is the Power Translator Professional, weighing in at \$369 for French, German and Spanish, which is “not for households.” It includes specific subject and profession dictionaries and is evidently much more powerful, intended for large business and networks. I can't speak for the value of this program; I'd be curious if it really is much better, or just has bigger parts.

All this isn't very useful for those “households” who have bought the lesser programs, which are incomplete and buggy enough to have trouble managing even their basic function. Inadequate software isn't a valid substitute for software that can manage simple translations—especially since being able to mistranslate a sentence is not the same as being able to translate a simple sentence. Globalink needs to accept

that even products at the lowest level of its software hierarchy must at least work properly.

Vanbrugh – “Belinda: But you know we must return good for evil!”

Lady Brute: That may be a mistake in the translation.”

So these programs are somewhat useful, in a clumsy way, and could be much better if someone spent some time repairing the obvious glitches. But is computer translation really a functional idea? I believe that it is: computers should be ideal for producing a mass of (admittedly very raw) data that can be reworked into an acceptable translation. Large dictionaries on CD-ROM, a smooth interface for selecting alternative meanings, an intuitive process for adding dictionary words—I guess I have a dream. Certainly these programs helped me a great deal while I was finishing my dissertation, and for that I am, with some reservations, grateful. 🐉

French Assistant for Macintosh

German Assistant for Macintosh

Italian Assistant for Macintosh

Power Translator for Macintosh/French

Power Translator for Macintosh/German

Also available: Spanish Assistant for Macintosh

Power Translator for Macintosh/Spanish

Assistant Programs \$59 each

Power Translator Programs \$139 each

Upgrade from Assistant to Power Translator \$49 each

Globalink, Inc.

9302 Lee Highway

Fairfax, Virginia 22031

(703) 273-5600, (800) 255-5660; FAX

(703) 273-3866

System Requirements: Macintosh II or higher; System 7.0 or higher; 2 megs RAM (4 megs recommended); Assistants require 5-6 megs, Power Translators 20-36 megs of hard drive space

Paul Attinello is a writer and musician who will finally have his doctorate by the time this is printed. He has published stories, poems and articles on music, including articles translated into four languages (by other people). He teaches at the University of Hong Kong and is trying to learn enough Cantonese to get by.

Healthy Computing

Early Symptoms, Prevention, and Management of RSI

for Computer Users

by Joan Lichterman

Repetitive strain injury (RSI) symptoms vary depending on the problems: tendons and/or nerves, which ones, and where the problems originate. Most people miss the first signs which can be an achiness, heaviness, tiredness, or tightness in the arms; difficulty holding one's head up; shoulders that feel like concrete, etc. Beyond that, one can experience tingling along the arms and/or in the hands and fingers, and along one's neck and cheeks. Again, the symptoms depend on what and where the problems are.

There are five generally recognized "risk factors": force, repetition, static and/or awkward postures, vibration, and direct pressure (like resting one's wrists on a wrist rest while typing); there are others as well, such as stress and extremes in temperature—especially cold. In addition, you should know that working on a computer more than four hours a day puts you at risk. Some of the research done elsewhere indicates that the injury rate increases exponentially after the four-hour mark, even for people working less than full-time. Here are some general pointers to follow to avoid or minimize injury:

- Rest is essential; working when exhausted diminishes blood flow throughout the body, which affects one's tendons enormously. Exercise is also important, to increase circulation. Not occasional exercise, but every day (and preferably to interrupt hours spent in a static position). Good posture is critical; we often tend to do desk work in the "forward neck" posture, which throws one's spine out of alignment and

Denial is not just a river in
Egypt. As computer
injuries can be disabling
denial that you have
a potentially serious
problem ("Oh, but it's not
bad yet"), or delay in
getting treatment
and making changes in
work procedures
and habits, may lead
to lifelong changes

puts pressure on one's nervous and vascular systems, particularly in the thoracic outlet area (generally, an area from the indentation between your collarbone and neck behind the top of your rib cage toward your shoulder, where a bundle of nerves, veins and arteries converges before passing out into your arms). When reading, instead of placing the material flat on the table, put it at an angle, like that of a drafting table; an easy, cheap way to do that is to get a 3-ring binder with large rings, putting that on the table with the lower part close to your body. When you look down, pivot your head down (feel your head behind the middle of your ears as you do that) without misaligning your neck. It's amazing what a huge difference that can make. Also, keep your shoulders open as much as possible, and make sure your body is not twisted.

- Use comfort as a guide. You need to keep checking in with your body (we tend to live in our heads and forget we are physical beings) to see if you are comfortable. If an activity doesn't feel comfortable, something needs to change: either how you do it or how long you do it.

- Rest breaks are also essential, and so are warm-ups and stretching. Athletes don't start playing before warming up, and when we're using computers we're essentially forcing our tendons to do athletics. Take a mini break every 20 minutes; get up and stretch your arms/hands, do a couple of doorway ("pec") stretches to keep your shoulders open. Take a slightly longer break at least every hour; vary your activities, if possible, so you're not on the computer or writing for hours at a time.

- Breathing from the abdomen is also essential, and something we are not very good at doing. When we don't breathe from the abdomen, we use the scalene muscles in the neck, which tends to bring up the rib cage and put pressure on the thoracic outlet. The position of one's chair, desk, keyboard, and limbs is very important. Generally, your knees, hips, and elbows should be at 90-degree angles (more or less), and your wrists should be straight—not "deviated" towards the left or right, and not raised or lowered in relation to your arm. Beware of rigid formulas, however, because we are all different: use comfort as a guide.

- Work with your elbows close to your body (don't extend your arms), but not stiffly; your arms should "float" over the keyboard.

- Keep your arms and body warm. If your tendons are cold they're more brittle. If your whole body is cold, you will tend to bring your shoulders together. I can't write at all when I'm cold, and use fingerless gloves as needed to keep my arms warm.

I think the two primary causes of repetitive strain injuries for computer users are neurovascular compression (pressure on the thoracic outlet and the nerves, veins, and arteries leading into your arms), and myofascial stress. Fascia is the web-like connective tissue that holds everything together in our bodies; myofascial tissue permeates through muscle, and ultimately becomes the tendon. To quote from an excellent book published recently by Sharon Butler, "Fascia is not only closely related to the contraction of muscle tissue, but also to its release or lengthening.... Fascia is amazing stuff. It is part of the body's natural protection system, one of the body's best defenses against injury.... It is capable of changing chemically, becoming sticky or dense when it is subjected to stress or injury.... Any time a strain occurs in the body, the fascia responds by going through a chemical change...." The long and short of it is that the fascia "quickly forms scar tissue," which limits the stretching ability of a group of muscles and tendons.

The cure for repetitive strain injuries is prevention

Two of the most important things to remember are: (1) The cure for repetitive strain injuries is prevention, so if you have just begun to experience some symptoms

you need to make some changes very quickly. If you do, you will get good results; it may take a while, but at least you won't end up with permanent injuries. (2) Denial is not just a river in Egypt. As computer injuries can be disabling, denial that you have a potentially serious problem ("Oh, but it's not bad yet"), or delay in getting treatment and making changes in work procedures and habits, may lead to lifelong changes for which you hadn't bargained.

PS: Preventing eye strain is also important. If you need glasses, make sure you have a pair dedicated to computer use (the focal point probably will be different for computer use than it will be for desk work). Glare on the screen, or from a window or overhead lighting, also contributes to musculoskeletal problems. 

Some good books to read are:

The Computer User's Survival Guide, by Joan Stigliani (O'Reilly, 1995);

Repetitive Strain Injury: A Computer User's Guide, by Emil Pascarelli, MD, and Deborah Quilter (John Wiley & Sons, 1994);

Conquering Carpal Tunnel Syndrome and Other Repetitive Strain Injuries: A Self-Care Program, by Sharon Butler (Advanced Press, 1995, Berwyn, PA; (800) 909-9795); and

The Hand Book: Preventing Computer Injury, by Stephanie Brown, which is also available on diskette as KeyMoves, from Ergonome, Inc. (145 W. 96th St., NYC 10025; (212) 222-9600). Brown is a concert pianist, and the book is fully illustrated with b/w photos on computer/mouse use and self-care; the diskette is interactive and actually shows how your hands should move across a keyboard.

Joan Lichterman is Coordinator of the East Bay RSI Support Group. She can be reached at 3844 Ruby St., Oakland, CA 94609; (510) 653-1802.

The Contour Mouse

by CatieBranwyn Fuld

A while back I found myself with pain in both of my arms such that I couldn't use a fork, let alone type, or click a mouse button. (Being a writer this did not make me very happy.) After a week and a half of enforced rest, and three weeks of almost no typing (hey a lady has to check her email) I felt almost back to normal. Since I also happen to work for BMUG, I suddenly found myself with the opportunity to try the new Contour Mouse from Contour Design Inc.

The three button Contour Mouse incorporates two innovations in mouse design: multiple sizes and an open hand architecture.

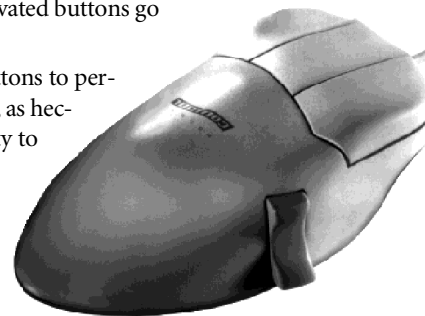
To be honest, my first day with the new, oddly shaped mouse was less than stellar. To start with the Contour Mouse looks odd. The Contour Mouse is larger than most standard mice, has three buttons, reminding me of those subversive Amiga mice, has a grip holder for your thumb, and is literally contoured to fit the curves and valleys of the human hand. All of this made my first day of using the Contour Mouse rather awkward. But I persevered, and I'm glad I did. A large part of the point behind the Contour Mouse is its shape. By fitting to my hand, with comfortable nooks for my fingers on the buttons, the grip for my thumb, and the slight slope of the whole package, I began to notice that my hand didn't hurt while I worked. The shape of the Contour Mouse allows my hand to rest without pressure or strain, something my tendons and muscles desperately need, while providing me with a comfortable grip to work with. I found that I used less force and tension when I needed to move the mouse. Rather than gripping the mouse with my stressed fingers, I can gently slide the mouse around my mouse pad with the heel of my palm and a little force from the larger muscles of my arm, reducing the stress on my tendons.

According to Contour Design, "The three button Contour Mouse incorporates two innovations in mouse design: multiple sizes and an open hand architecture. The user's hand rest balanced and relaxed on a mouse that matches its size, with appropriate support provided for the fingers. The wrist is at a neutral tilt, which reduces strain on the wrist and forearm." As I found in using the mouse, with already sore arms, the four key features of the Contour Mouse: 1- tilted palm support 2- elevated wrist support 3- thumb support 4- sculpted elevated buttons go a long way toward eliminating as much stress as possible while you work.

There is an additional feature which allows the user to program the three buttons to perform tasks faster and easier within different programs, being a near computer, as hectic as my life as a graduate student has been lately, I have not had the opportunity to test out the convenience of this feature.

I have found switching to Contour Mouse has made such a big difference in helping keep my arms from getting worse, that'll actually miss it when I am working at home. The small, clumsy feel of my old basic mouse is actually uncomfortable to me now. In the end, I cannot recommend the Contour Mouse high enough. I know some people who have tried it, and not liked the feel of its different shape. For me, I think it was well worth the effort to get used to the three buttons, the tilted wrist rest, the larger size and that wonderfully odd thumb rest!

Contour Mouse comes in several sizes to fit different hand sizes as well as both left and right hand accessible models. There are models available for Macintosh and PC. The Macintosh Version cost \$89.95 and is available direct from Contour Design. The PC version is \$79.95 and is available in select computer retail stores. 



To contact Contour Design you can call them at 1-(800) 462-6678 or check out their Web site at <http://www.contourdes.com>

CatieBranwyn Fuld

Repetitive Strain Injury

Word to the Wise

by Megan Lynch

Feeling the optimism of a rare upswing in my life, I walked with a bounce in my step on January 7th, (1995 as I made my way to the MacWorld Expo. I hurried across the last crosswalk and lifted my right foot to mount the generous helping of curb. Whether the fault of faddish gargantuan-soled tennis shoes or my cheerful ruminations on things other than walking, I fell straight to the ground. I put my hands out to stop me. Bystanders cooed choruses of “Are you alright?” I was; the only thing that hurt was my pride. I hurried into the MacExpo and thought nothing more of it.

I had been working one month as a temp doing data entry. On Tuesday or Wednesday of the next week, my right forearm and wrist began to ache. My first thought was that it was related to the fall. I couldn’t understand why the pain had not started directly after the fall, but I was sure that I would heal in a day or two. I continued working. By the next Wednesday, I was sure that this was something more than delayed healing from a minor fall. I notified my temp agency that I would have to call in sick for a while. I splinted my right hand with a rollerblading wristguard and started using my left hand. Within two days, my left wrist and forearm began to ache as well. I got some recommendations from my father for several specialists to which his employer sends their stricken workers. I was scared to death that I had the Carpal Tunnel Syndrome everyone talked about and that I would lose the use of my hands.

That was the beginning of something that has changed my life for the foreseeable future. I feel compelled to tell everyone about my experience so that they can take preventative measures and avoid high medical bills, pain, stress and unplanned career changes.

I have talked to many computer users casually since my injury, and I have found that many already suffer from pain. Most do

nothing about it other than take ibuprofen. They, like I used to, think that Repetitive Strain Injuries take years to develop. I got it in just a month. There are many contributing factors to RSI. In my case, the straw that broke the camel’s back was a horrendous workplace setup. The last week or so that I had worked at my temp job, I had to do data entry at a coffee table that was not wide enough to have the keyboard in front of the monitor. Hence I had the keyboard in front of me while I gazed at a monitor at stomach level to my right. Hardly an ergonomic workplace. As a temp worker, I dared not complain.

What is Repetitive Strain Injury and why should you care about it? Repetitive Strain Injury is an umbrella term for many different types of injury that occur as a result of repetitive motion. Contrary to popular opinion, RSI existed before computers. Meat packers, scribes, musicians, cigar rollers and other professions have suffered from RSI for years.

I wasn’t aware that I had many risk factors for RSI and like many of you, I thought such a thing could never happen to me. So let me tell you why you need to be on the lookout for RSI. Most occupations in the U.S. today use a computer in some facet of their work. Many of us use it recreationally after we come home from work. We strike the keys again and again thousands of times every day. The human body was not created to do things with machine-like repetition. It does best with a variety of different motions. We all usually sit down at the computer. Likewise, the body was not meant to sit for hours at a time. Many of us have imperfect posture that can be made worse by prolonged stints at a workstation. The majority of Americans are out of shape. With increased sedentarism comes a slower metabolism. The circulation worsens, delaying healing and depositing waste products as scar tissue instead of getting rid of them. The emphasis on speed and productivity in most workplaces creates stress and discourages people from stretching and resting

Beware of “ergonomic” products. Currently, products don’t have to meet any standards in order to be called ergonomic. Opinions on what is ergonomic seem to change every couple months.

their overloaded bodies. All of the foregoing are risk factors for RSI. How many do you have?

As I had no medical insurance and little savings, I chose a doctor on the basis of whether my parents’ credit card could be billed. That doctor and his office were very unhelpful. I called up with a hand problem and they handed me forms to fill out, did not help me open their doors although they could see I was having trouble doing it! He also acted as if I were a hypochondriac and “shielded” me from medical explanations he felt were too technical for me. The only good and true advice I got from this doctor was to stop wearing the wristguards all the time. In order to insure a full range of motion when healed, one needs a full range of motion while healing. He said I had contused a nerve in the fall and that all would be well in time. I knew this could not be true and set about getting second opinions. Nobody knows what you feel like as well as

you do. I urge those who suspect they have RSI to get second opinions.

Meanwhile, my boyfriend had been trolling Compuserve for information regarding RSI. He came upon the RSI Network Newsletter, which I devoured voraciously. One of the names on my recommended list came up again and again: Dr. Robert Markison. Many people on the RNN list seemed quite pleased with Dr. Markison. Don't just pick somebody out of the Yellow Pages; rely on the experience of those who've been through the mill already. Dr. Markison looked at the tests that the previous doctor had run on me, listened to my explanation of my symptoms and ran my hands and arms through a series of touch-tests to determine where they hurt. He did not treat me as a clueless hypochondriac and was patient in answering the questions I had. Most doctors tend to see everything in terms of their specialty. People who work with muscles think it's a muscle problem, chiropractors think it's an alignment problem and surgeons want to perform surgery. Dr. Markison is wonderful in that, although he is a surgeon, he's not scalpel-happy. He recommends other modes of therapy: physical therapy, diet, exercise, chiropractics, acupuncture, etc. As there are many cumulative causes to most RSI's, it is important that the doctor you choose be open to a holistic approach. Besides, the statistics on Carpal Tunnel Release Surgery show a high failure rate. Many people have the same or worse amount of pain than before.

Dr. Markison talked with me about my computer use. When he found out that I hoped to do graphic design, he told me that he sees many computer designers as patients. He recommended that I use computers only for the tasks at which they are truly superior. Lest you think the doctor a Luddite, he has a nearly all-Macintosh office and knows quite a bit about many different programs. He told me he had been commissioned to morph some different fish together in a short animation for a Florida aquarium. Rather than starting on the computer as most people would, he painted the fish in oils, then had them scanned and worked from there. This demonstrates the kind of behavior modification in which those of us with RSI have to engage. He also showed me his voice recognition system. He had broken down and bought a PC for this as the Mac programs weren't yet competitive. It worked admirably well and if an affordable version ever shows up for the Mac, I would purchase it. He diagnosed my problem as tenosynovitis and gave me refer-

als to Spine, Hand, Arm, Rehabilitation, Ergonomics (S.H.A.R.E.) and the Hand Therapy group.

Meanwhile, having read Felecia Z. Aldrich's review of *How to Survive Your Computer Workstation*, I wrote her a note on the Planet asking if she could recommend any good chiropractors. She told me that her clients had positive things to say about Dr. Agi Ban. I had filed this info away as I was delaying in making appointments because my finances were so bad. My family had also raised me to distrust the chiropractic profession. Finally, I awoke one morning with a sharp pain in my right upper arm. As I had previously only had pain in my hands and forearms, I was alarmed. In a panic, I managed to talk myself into an appointment that day.

One of the major cumulative causes of RSI is bad posture. I had had back problems since I was 17, but had never found much relief. With Dr. Ban's help, I was able to see what damage had occurred and what was contributing to my RSI. My habitual slump had lengthened and weakened my back muscles while shortening and contracting my pectoral muscles. Those rock hard muscles were cutting off my circulation as well as the nerves going into the arm. She put me on a program of physical therapy exercises three times a day. She also recommended yoga and exercise.

I then went for an ergonomic evaluation at S.H.A.R.E. They measured my hands and forearms by volume and then proceeded to have me type. They tried me with different sorts of keyboards and different setups. They hooked me up to an electromyograph so that I could see which parts of me were more stressed during typing, what keyboard and desk setups were best, and what method of striking the keys was least stressful. They measured my body and then measured my hands and forearms again. They were definitely swollen after that activity. This confirmed that my RSI was not due only to cervical nerve compression. I had genuine inflammation of my tendons.

This is roughly the spot that I am still at. I know that I have to make major lifestyle changes. I have to find a job that does not require heavy use of my hands. I have been looking for another job for 6 months now. I have to start a daily exercise regimen that includes general health exercises as well as my physical therapy regimen. I have to cut down on foods and drinks that aggravate my RSI. I have no guarantee that I am going to get better. There is no "magic bul-

They hooked me up to an electromyograph so that I could see which parts of me were more stressed during typing, what keyboard and desk setups were best and what method of striking the keys was least stressful. They measured my body and then measured my hands and forearms again. They were definitely swollen after that activity.

let" that is going to cure me in an instant.

I can think of no better reasons for people to start taking RSI prevention seriously. Prior to my injury I was eagerly learning different aspects of computer use and planning to learn HTML in preparation for a job in the computer industry. Now I am desperately looking for work which pays enough to live on without overburdening my hands. RSI has assaulted my confidence in myself and strained my relationship with a wonderful man. I have only been able to make it through this period financially with the help of my parents. I do not qualify for unemployment or disability. I am contemplating a worker's compensation suit, but know that that could take years to resolve itself.

What are some myths that have been punctured since I started doing research on RSI? Well, not all computer injuries are

If you work at a business, see if you can get the management to spring for an ergonomic evaluation. This saves businesses money in the long run.

Carpal Tunnel Syndrome, despite the media hype. RSI includes tendinitis, writer's cramp, trigger finger, and other injuries. Don't diagnose yourself, get to a doctor.

Beware of "ergonomic" products. Currently, products don't have to meet any standards in order to be called ergonomic. Opinions on what is ergonomic seem to change every couple months. Remember when everyone was rushing to buy wristpads? Well, some experts recommend against them. For people with wrist tendon injuries, a wristpad can actually aggravate them. A wristpad is useful if it reminds you to keep your wrists off the desk and the pad. If you have already been diagnosed with RSI, let your doctor or a recommended therapist help you choose equipment. If you are looking to buy equipment as a preventive measure, do a little reading first and make sure you don't buy anything without trying it out first. If that is not possible, at least make sure you can return it if you are not satisfied.

RSI is not just an injury of the hands or wrists. In many cases, an RSI-sufferer has had injuries to the spine or neck area. Bad posture can lay the ground for an RSI injury. For example, constantly cradling the phone between the head and shoulder can create nerve pain that will radiate all the way down your arm.

RSI can take a long time to develop. Mine developed without any warning signs until it erupted full-blown. Most of the time people notice pain for some time before they do anything about it. Don't delay in getting "those little pains" looked at. Early

diagnosis can make a great deal of difference. In types of RSI where the nerves are compressed, you can develop permanent nerve damage.

How can you prevent RSI? Make sure that you have an ergonomic workplace and home office. There are many books on the subject. If you work at a business, see if you can get the management to spring for an ergonomic evaluation. This saves businesses money in the long run. The average legal compensation for an RSI injury is \$29,000. If your workplace is uncooperative, make whatever changes you can afford to do yourself. Think of how important the use of your hands is to you. It's worth paying to prevent injury to them.

Place your monitor at a comfortable eye level. Purchase an anti-glare filter for your monitor. Invest in an ergonomic chair. Keep your keyboard where your elbows can be at your sides and your forearms at a 45° angle. Arrange your desk area in such a way that you can keep your mouse at your side instead of having to reach over to the desk in front of you. If you work with phones often, purchase a headset; at the very least get a phone rest.

Everyone who uses a computer is at risk for RSI, but clerical and temp workers are especially exposed. Besides taking the steps needed to protect us individually, we need to unionize and bargain for better workplace conditions. Otherwise, we can be disposed of as soon as we inconveniently develop a disability. We all take a healthy, functioning body for granted. I don't anymore. I will be in therapy for at least a year. I urge every one of you to take the proper steps to prevent RSI.

Resources I have used

Dr. Robert Markison Hand Surgeon

2000 Van Ness #502
S.F., CA (415) 929) 5900

Dr. Agi Ban

Ashby Chiropractic & Health Center
931-B Ashby Ave.
Berkeley, CA 94710 (510) 845-4540

S.H.A.R.E.

310 Grand Ave.
Oakland, CA 94610 (510) 893) 7463
(vox) 893-9432 (fax)

Linda Lorraine, Custom-made Gloves

call (415) 564) 5156 for an appointment
(415) 564-6384 (fax)

Recommended to me by Dr. Markison. Many people with RSI have bad circulation in their hands. Keeping the hands warm can improve healing. She has many choices of fabrics, colors and types of gloves, all tailored to you.

Handeze Gloves

Available from APS Technologies
(800) 443) 4996

Although Linda's gloves are about the same price as these, these use a material called Med-A-Likra which has been treated to insulate and massage. I sometimes wear my gloves from Linda and other times wear the Handeze gloves. These are also recommended by Adam Engst, who has RSI.

Coffee Break

Available on the Planet (Misc.Files) and many online services as well as major Mac Internet sites. Contact ThomasReed@aol.com only if you are having a very hard time finding it.

This is a valuable piece of Shareware that is brutally strict. It works as a screensaver that forces you to take a break from the computer. It is the willpower you never had.

Back Designs, Inc.

This store carries the best selection of ergonomic products 1045 Ashby Ave. in one place. They also offer professional fitting of their Berkeley, CA 94710 products and a 10-day comfort trial. They do mail order.

(510) 849-1923 (inquiries)
(800) 466) 1341 (orders)
(510) 549-0837 (fax)

Livinglinks Health Media

2142 Oxford St.
Berkeley, CA 94704
(510) 849) 1212
(510) 849-2340 (fax)

Carries a varied selection of health books, including books not normally carried in all-purpose bookstores. I bought my copy of Sharon Butler's book here.

Repetitive Strain Injury:
A Computer User's Guide
by Emil Pascarelli, MD and
Deborah Quilter
John Wiley & Sons, Inc.
ISBN 0-(471) 59532-2

This book is a valuable resource for those who have already begun to experience pain. Although it contains basic prevention advice, its real strength is sound medical and legal advice for those who already suffer from RSI. (I had to pay \$45 smackers for the hardback as it was the only thing around when I first got RSI. Take advantage of the fact that it's in paperback now!)

How to Survive Your Computer Workstation

by Julia S. Lacey with Tom
Dickson, DC,
CN and Howard Levenson, OD
A CRT Services, Inc. Publication
ISBN 09623-656-01
P.O. Box 1525
Kerrville, TX 78029 (800) 256-4379
A review of this book appears in the
Spring (1995) BMUG newsletter, p.174.
A practical book for prevention that
covers all aspects of computer injuries.

**Conquering Carpal Tunnel Syndrome
and Other Repetitive Strain Injuries: A
Self-Care Program**

by Sharon J. Butler
New Harbinger Publications, Inc.
ISBN 1) 57224-039-3

I have not yet put this book to good use. However, it was mentioned so often on the Sorehand mailing list that I knew that it must be working for a lot of people. The author has studied soft-tissue injuries and suffered from CTS herself. Using this stretching program that she devised, she is now asymptomatic.

"How to Make the Mac Easier on Your Eyes" by Michael Andreason Fall 1994
BMUG Newsletter, p.46

"The RSI Network Newsletter"

by Caroline Rose and Craig O'Donnell
Fall 1993 BMUG Newsletter, p.371
To subscribe to the RSI Network Newsletter itself, send email with just the words "subscribe rsi" in the body of the message. to majordomo@world.std.com.

"Is Your PC Killing You?"
by Naomi Wise

Computer Currents,
June 1, 1995, p.38

"Hands On Fire"
by Dr. Robert Markison

Keyboard Magazine,
April 1994, p.93
Although targeted at musicians, this article can be useful to those with computer injuries.

"Look, Mac - No Hands!"
by David Pogue

MacWorld Magazine,
August 1995, p.157
The only flaw with this article is he doesn't seem to realize that the majority of his readers can't just go out and buy all the equipment he describes with the ease with which he seems to buy. Otherwise, a very good description of the progression of RSI.

**Resources recommended
by reputable sources**

Hand Therapy of Oakland
3300 Webster St., Suite 1008
Oakland, CA 94609 (510) 465-9891

**Dr. Kilgore & Dr. Newmeyer Hand
Surgeons**
(450 Sutter St., Suite 2215
S.F., CA (415) 956-2525

Felecia Z. Aldrich
Sports and Orthopedic Specialists
6300 Telegraph Ave
Oakland, CA
510-547-8293

They treat all types of musculoskeletal as well as neuromuscular disorders, of course including RSI.

Navigator Systems
4210 Holden St.
Emeryville, CA 94608 (510) 653) 9385
(vox), (510) 655-5997 (fax)
They make very handsome, customizable office and home office furniture.

Keyboard Alternatives Vision
Alternatives email: keyalt@aol.com

URL: <http://www.intournet.co.il/keyboard/>

Tel: (800) 953-9262 / (707) 544-8000 /
Fax: (707) 522-1343

1242 College Avenue, Santa Rosa, CA
95404-3908

They carry many keyboards including the Comfort keyboard, the one I tested best on.

Dragon Systems (800) TALKTYPE
URL: <http://www.dragonsys.com>
Manufacturer of Power Secretary, a voice recognition system for the Mac.

Sorehand
This is an international mailing list. Send an email message to : <LISTSERV@itss-rv1.ucsf.EDU> with the message "Subscribe Sorehand <Your Name>" (The address of this mailing list changed since this article was first published.)

Web Pages
<http://www.cs.princeton.edu/~dwalach/tifaq/>

Typing Injury FAQ
<http://www.engr.unl.edu/ee/eeshop/rsi.html>
Site by Paul Marxhausen. He's a frequent contributor to the SOREHAND mailing list and runs the very useful

Find-A-Docpage.
<http://edisto.awod.com/netsci/Science/Special/feature01.html>
A website put up by Dr. Jonathan Bailin, the moderator of the Usenet group misc.health.injuries.rsi.moderate
<http://disability.com>



Kensington Thinking Mouse

by Dave Carpenter

Every once in a while a product comes along that changes the way you live, work, or play. The introduction of the Macintosh PowerBook was the last time I experienced this. When I have an inspiration to write an article, poem, or some other creative expression, instead of telling the muse to come back another day or hold the thought until I am in front of my keyboard back in my office, I now open my PowerBook and press the space bar. I am greeted with my word processor, and type in my Pulitzer Prize-winning words, no matter where I happen to be. Recently, I added the freedom to fax memos to the whole world with a new fax modem (Maidenhead, England is my current fax distance record).

Now is another such time: I have found the ultimate input device. Kensington Microware, Ltd. has introduced a new mouse for the Macintosh. Called the Thinking Mouse, it features four buttons and includes its now-familiar control panel software.

While to some of you this may not sound like an experience of Nirvana, when you write and mouse as much as I do every day, it's as close to Nirvana as I've come. I've looked at many input devices over the last couple of years, and tried several. Trackballs go against my engrained mousing habits; I just can't seem to change. A three-button mouse seemed promising, but the accompanying software wouldn't let me assign functions I wanted to any of the buttons; I was forced to use it the way the designers decided I should. I begged their pardon, and asked "isn't the whole concept of the Macintosh one of adapting products to the way people work rather than vice versa?" to no avail. Other two- and one-button mice exist, but they didn't seem much different from the original Apple mouse I was using.

I guess it was inevitable, but I wouldn't have predicted a mouse with four buttons. Where would you put them? Yet there they are, arranged quite logically and within easy

reach. A lot of thought apparently went into the design of the KTM hardware. It is an almost sensual experience to hold: the rounded, tapered shape of the mouse seems to fit all sizes of hands comfortably—at least of those I asked to test drive it. The mouse is molded from white plastic, and the sides are

Dragging (holding down the button and moving the mouse) increases the grip to 12 ounces

Dragging while lifting the mouse (when you run out of mouse pad and move the mouse back onto it)

weighs in at 14 to 16 ounces of grip These forces are the stress in “repetitive stress injury”.

coated with a soft rubberlike material. This coating feels very comfortable and increases your mousing confidence if not your ability to hold the mouse. While the Thinking Mouse is a traditional optomechanical mouse ball design, it is a high resolution input device, giving 400 counts per inch, the

highest of the input devices available for the Macintosh.

The four buttons are located at the front most top surface of the mouse, in a quadrant arrangement. Arranging the buttons symmetrically allows both righties and lefties to use the mouse. The buttons provide you with an almost infinite means for controlling your application programs. Using the control panel software that comes with the mouse, you can define any of the buttons to be your primary button, or to simulate double- or triple-clicking, lock-down clicking (for dragging an object or scrolling a large document), typing in text (for those repetitive typing tasks), or for responding to a dialog box (define a button to press the return key). In addition to providing the many actions you can assign to the buttons, you can assign another action to a chord. Kensington defines a chord as the simultaneous pressing of the two front most buttons; in effect, it is a fifth button. Using so many buttons may seem like frivolous play, but the effort saved on your hand's and arm's muscles and tendons is great (more on this later). Also, the savings in time by clicking a button to execute a macro (such as an AppleScript or QuickKeys script) adds up.

Multiple buttons at your disposal is a really neat way to speed up your work, but what advantage are the many ways of clicking if you can't get the cursor moved to where you want to click? Fret not, because the Thinking Mouse control panel software provides three ways to get your cursor where you want it: cursor acceleration, brilliant cursor, and axis-only control.

Cursor acceleration allows you to speed up how your cursor responds to your mouse movements. With the standard Apple mouse (and most other input devices), the relationship between the distance and speed the mouse moves and the distance and speed the cursor moves, is linear. In other words, when you move the mouse three inches right, the cursor moves a certain distance on the screen, no matter how fast or

slow you move the mouse. The Thinking Mouse software lets you change this relationship. You can set the software so that when you move the mouse slowly, the cursor moves that same distance, but when you move the mouse quickly, it covers more distance. When you move it very quickly (even over a short distance), the cursor speeds up to move way across your screen. This efficiency of motion not only speeds the way you work, but again saves hand and arm motion. You can also assign certain keys to put the cursor into slow motion to give you precise control, when you need to nudge that graphic into place on your new title page, for instance.

Brilliant cursor is another control enhancement which allows you to get the cursor with little movement of the mouse to places ("hot spots") you define on your screen (such as menus and tool bars). After you've defined where you want these spots, you hold down certain keys on the keyboard and move the mouse. The cursor does not travel so much as it jumps to the nearest of these spots. Keep moving the mouse with these keys pressed, and the cursor jumps to the next, and the next, until you let up on the keys. It's sort of like transporting your cursor across the vast expanses of your screen (apologies to the memory of Star Trek creator Gene Roddenberry).

Axis-only control allows you to move the cursor along only the vertical or horizontal axis by holding down a combination of keyboard keys. Graphic illustrator kings and page layout mavens know how important this feature is.

Many of these features may seem familiar to users of Kensington's Turbo Mouse trackball; the cursor acceleration and brilliant cursor features are almost identical. The Thinking Mouse software has added several levels of customization to the acceleration routines, more than most users will ever venture to use. For instance, you can change the resolution of the mouse (counts per inch). The software supports many other input devices, whether they be mice or trackballs, Kensington or not. You can also create custom feature sets, so that the KTM will have customized button definitions and cursor control parameters for each application program.

Default settings in early versions of the control panel software were set such that when the mouse was moved very quickly,

the cursor moved very little, or even backward. Changing the settings in your control panel corrects this aberration, so don't be unduly alarmed if you experience this—it's an easy fix. The software is now shipping with new defaults, which eliminate this behavior.

The multiple, programmable buttons and the cursor control software give one great advantage to all of us who use Macintosh computers many hours a day: freedom from injury. Whether you call it carpal tunnel syndrome, repetitive stress injury, or just "a sore knuckle," reducing the amount of motion and effort you exert while working is just plain healthy, and for sufferers of these conditions, relieving.

John Kieley, a researcher in the Ergonomics Laboratory at the University of California at Berkeley, studied the amount of effort that users of mice exert when a person is mousing around. Kieley found that users press the mouse button with an average measured force of 2 ounces. What is surprising is that he also found that the other fingers grip the mouse with a force of around 8 ounces when clicking. Double-clicking results in an grip increase to 10 ounces. Dragging (holding down the button and moving the mouse) increases the grip to 12 ounces. Dragging while lifting the mouse (when you run out of mouse pad and move the mouse back onto it) weighs in at 14 to 16 ounces of grip. These forces are the stress in "repetitive stress injury". And you thought clicking a button was so easy!

Kensington's marketing group consulted Kieley when designing the KTM and several of their design decisions were made based on his research. Kensington sees the KTM as the answer to overworked hands. With one of the buttons simulating a locked-down button (for dragging), for example, very little gripping force is required to move the mouse. It is surprising how simple the mousing task becomes.

The KTM's well-written user guide also includes a discussion of ergonomic considerations for your work station: placement of the mouse, your chair and desk, your keyboard and monitor.

The Kensington Thinking Mouse comes with a 90-day money-back guarantee; if you don't like it, it costs you nothing but one-way shipping. If you have any desire to change from your current mouse or trackball, I highly recommend giving this product a try.

You really don't know what an advantage these features can be in your work until you try it. I'll bet you a doughnut you will probably keep it. 

Counter-cynic editorial policy statement: I paid full retail cash price for this product. I received no compensation in exchange for this review. I just like the mouse.

Kensington Thinking Mouse, about \$70. Requires a Macintosh computer with an ADB port; hard disk drive recommended; System 6.0.7 or greater.

Dave Carpenter, a writer of all things hardware and soft, is trying to live an aleatory life. When he's not writing, he's providing voice-over narration for audio, video, and multimedia projects. You can reach him on Planet BMUG at Dave_C_Carpenter@BMUG.org.

David C. Carpenter
1217 Oak Creek Way
Sunnyvale, CA 94089
(408) 749-8217

Copyright 1994, David Carpenter. This article may be used by any computer user group for publication in the group newsletter, if 1) the article is used in its entirety, including title, sidebars, and this copyright statement, 2) the article is not altered in any way, 3) a copy of the newsletter is sent to me at P.O. Box 475, Cupertino, CA 95015.

Kensington Microware, Ltd., 2855
Campus Drive, San Mateo, CA 94403,
800-535-4242, 415-572-2700, fax: 415-
572-9675

Computer Solutions to Computer Pain

How to Stay Healthy at the Computer with Email Tips™

by Erik Peper and Katherine Hughes Gibney

Once a week, employees at San Francisco State University open their electronic mailboxes and find the latest issue of Healthy Computing Tips™.

These are short specific recommendations broadcast by email to promote health in the workstation. The Healthy Computing Tips cover a range of topics, including work style/work habits, ergonomics, somatic awareness, physical/mental emotional relaxation, and regeneration techniques, vision care, stress management, and stretching/strengthening and movement exercises.

They were initially developed by Professor Erik Peper and Ms. Dianne Shumay and their research studies at San Francisco State University have shown that 98.7% of the more than 2600 recipients continue to subscribe with 58% of the respondents to the periodic follow-up surveys reporting feeling better since reading the Email Tips.

“As a person who is constantly on the computer, I very much appreciate these exercises, tips and service.”—Subscriber

Presently the Email Tips are produced by Dr. Erik Peper and Katherine Hughes Gibney and can be ordered for email delivery from @Work Solutions.

The goals of the weekly Healthy Computing Email Tips are:

- To enhance the quality and productivity of each individual who works at computers.
- To reduce the frequency and severity injury from repetitive motion injuries

“When a new email tip appears, I see members of my staff trying it out and saying, ‘Aaah, that helps’”

—Human Resource Supervisor

arising from computer use.

- To develop healthy work style patterns.

Play with Your Feet

Healthy Computing Tip #50

Regenerate and increase flexibility of your neck, back, and hips by changing the habitual movement patterns of your feet and toes. To increase flexibility and decrease tension play with your feet.

1. Push away from the keyboard and sit at the edge of the chair with the knees bent at a right angle and your feet shoulder width apart and flat on the floor.
2. Gently arch your head backwards by looking up and back to the farthest spot back on the ceiling. Remember that spot. Bring your head forward upright.

Relax and rest.

3. Gently slide your left foot six inches forward and then, while keeping the heel of the foot on the floor, lift the ball of the foot up (flexing the ankle) while at the same time curling the toes under, hold for one second. Then uncurl the toes, bring the ball of the foot down and relax the foot.

Be sure to keep breathing diaphragmatically: relax the eyes, jaw, neck, and shoulders while doing the movements. After each movement rest for a few moments.

4. Gently slide your left foot six inches backward and then, while keeping the ball of the foot on the ground, lift the heel up (extending the ankle) and at the same time bend your toes upward. Then relax the toes, bring the heel of the foot down and relax the foot completely.

5. Continue the movements by sliding the left foot forward and lifting the ball of the foot while curling the toes under. Then let it go and relax and slide the foot backwards while lifting the heel while lifting the toes upward.

6. Repeat this practice 5 or more times until the movement feels comfortable and smooth.

7. Practice the same sequence five or more times with your right foot until the movement feels smooth and comfortable.

8. After you are done with both feet, let the feet be relaxed on the floor and the knees bent at right angle. Then gently

arch your head backwards by looking up and back to the farthest spot back on the ceiling. Return your head forward. Observe how much further you could look back and notice the looseness and freedom of neck and head movement.

9. Optional: Do the movements with both feet at the same time except that as the right foot goes forward and lifting the ball of the foot while curling toes down, the left foot goes back and the heel goes up and the toes lift up backward.

10. Practice this or other larger body movements every hour.

Adjust the C hair

Healthy Computing Tip #54

Sitting is the major activity when working at a computer, yet our bodies are designed for intermittent movement. The chair is often incorrectly adjusted or kept in one seemingly comfortable position.

Although most people are aware of the “proper sitting posture” while working at the computer, they often lean forward (nose to the screen), sit at the edge of the chair with only their toes on the floor, wrap their feet around the chair legs, or lean back to feel support. When you lean and tilt the chair back the disc pressure in the spinal column is reduced. However, this position causes you to reach forward with your arms while using the keyboard and mouse. This usually increases muscle tension—of which we are often unaware—in the neck, shoulders, back and arms. For extended work periods, there is no perfect ergonomic position. All positions, if held too long, lead to discomfort; therefore, adjust the chair.

1. During data entry adjust the chair so that you are sitting upright with the feet comfortably on the floor, your upper arms hanging down parallel to the body and your elbows bent at about 90–110 degrees when your fingers touch the keyboard. Be sure your neck and shoulders remain relaxed.

If you are petite (5 feet 4 inches or less), the desk, keyboard, and monitor will need to be lowered when the chair is correctly adjusted.

If you job share, always re-adjust the chair and re-arrange the keyboard and monitor to fit your body. If at all possible, share the same workstation with a person who is approximately your same

build since it is nearly impossible to correctly adjust the workstation for individuals who are significantly different (e.g., 6 feet 4 inches versus 5 feet 1 inch person; 254 lbs versus 105 lbs).

2. When answering the phone lean back and adjust the chair slightly backwards so that your back is supported by the chair. If possible, use a telephone headset while talking so that your neck, shoulders and arms remain relaxed.

3. When sitting in a chair for a long time remind yourself to do body movements. Paradoxically, a very comfortable chair may encourage a person to remain sitting for a long time without movement. Be sure to alter your tasks (e.g., standing up to file), periodically adjust your chair, and do large body movements.

Wear your watch on the opposite wrist and, when you check the time, use it as a reminder to stretch and move.

Stand, stretch, move, and look out the window to relax your eyes every 15 to 30 minutes.

Healthy Computing Tips are brought to you by @Work Solutions. Working with individuals, businesses and risk managers, @Work Solutions provides individual and group training in healthy computing practices as well as worksite ergonomic evaluations and implementations, workshops, lectures and consultation. 

@Work Solutions

2236 Derby Street
Berkeley, CA 94705
Phone: (800) 848-1617
Fax: (800) 848-1617
Email: atwork@emf.net
Web site: www.emf.net/~atwork

Erik Peper is Professor and Director of the Institute for Holistic Healing Studies Program, San Francisco State University and Program Director of @Work Solutions. He also provides remedial training for computer related injuries at BFTI in Berkeley (510) 841 7227.

Katherine Hughes Gibney is Program Co-Director of @Work Solutions and provides remedial training for computer related injuries at the ATMA Group in San Rafael, CA 94903, Tel 415 499 3319, email: atmagroup@aol.com

Copyright ©1997 Erik Peper. All Rights Reserved.

Living With the Mac

Poor Little Mac TCP DNR

by Ron Hunsinger

Poor MacTCP DNR. He just sits there in a corner of the System Folder, minding his own business, not bothering anybody. But will people leave him alone? No. They malign him, they trash him, they advise other people to trash him, they generally pick on him. Does he complain? No. He just comes back quietly from whatever death he's been sent to and resumes minding his own business. Does that pacify his tormentors? On the contrary, it seems to encourage them. They've learned that whatever they do to MacTCP DNR, nothing bad happens. So they do it again.

Poor little guy.

Okay, he's a little odd. When you try to get to know him, he keeps giving strange answers:

- Get Info says MacTCP DNR is a control panel. But control panels are supposed to go in the Control Panels folder, aren't they? So what's he doing in the System Folder?

- Double-click on MacTCP DNR, and you get a dialog saying it cannot be opened. Huh? A control panel that can't be opened? Isn't that the whole idea of control panels—that they open into a window, a panel that lets you control something? So if it doesn't open into a panel, if you can't use it to control something, then why is it a control panel?

- Balloon Help says, "This is a control panel. To customize part of your computer system, open this item." Unless you've ever run classic networking, that is, in which case Balloon Help reiterates that you can't open it. Very confusing.

- So you move him to the Control Panels folder, where you think maybe he belongs, and what happens? He comes right back. Move him to the trash. Empty the trash. Restart. And he's back. In the System Folder. Well, okay, if he isn't really a control panel, maybe that's where he goes.

But if he isn't a control panel, why does the system say he is?

- And, going back to Get Info, you may notice that the modification date on MacTCP DNR keeps changing. Something is going on, something that we aren't being told about. What's he up to?

So granted, he's an odd little guy. But is that any reason to pick on him?

Lay off, already. Trashing MacTCP DNR is voodoo. It won't make a bit of difference. You're just wasting your time, time that you could have spent tracking down the real problem.

Trashing MacTCP DNR is voodoo. It won't make a bit of difference.

Let me tell you the story of MacTCP DNR. Maybe if you understand him, you'll leave him alone.

The Story of MacTCP DNR

Programs that need to use the Domain Name System (DNS) access it via a piece of software on your Macintosh called the Domain Name Resolver. The Domain Name Resolver (DNR) lives in the TCP control panel, which may be called TCP/IP (Transmission Control Protocol/Internet Protocol), or it may be called MacTCP, or it may be called something else. The name doesn't matter. It's the file in the Control Panels folder with a type of "cdev" and a creator of "ztcp". (All control panels have a type of "cdev". That's how the system knows they're control panels. The system

relies on the creator to identify specific control panels, since users can and do change the names.)

Inside the TCP control panel is a resource of type "dnrp", which stands for "Domain Name Resolver Procedure." That resource is the DNR.

So, every program that needs to access the DNS begins by finding the DNR and loading its own private copy. To get the DNR, it searches for the first file in the Control Panels folder that has type "cdev", creator "ztcp", and contains at least one "dnrp" resource. It loads a copy of the first such resource into its own memory partition and uses it to resolve any domain names it comes across.

Every program, that is, except programs that were written before System 7 came out. Before System 7, there was no Control Panels folder. These old programs look for the TCP control panel in the System Folder instead of the Control Panels folder. And they expect it to have the creator code "mtcp" instead of "ztcp", because that was the creator code used by MacTCP v1.0.x, the System 6 version of MacTCP.

To accommodate those old programs, every time you restart your computer, the real TCP control panel, the one in your Control Panels folder, makes sure there is a file that will pass for MacTCP 1.0, at least well enough to satisfy System 6 programs. If there already is a "cdev"/"mtcp" file in the System Folder, it'll use that, no matter what

Trashing MacTCP DNR is voodoo. It won't make a bit of difference. You're just wasting your time, time that you could have spent tracking down the real problem.

its name. If not, it makes one and calls it "MacTCP DNR". Once it has found or made such a file, it copies into it an exact copy of the "real" DNR. That way, when these old programs go looking in the System Folder, they will find and use exactly the same DNR as more modern programs that know to look in the Control Panels folder.

And that explains all the odd behavior of MacTCP DNR:

- Since the old programs are looking for a control panel, MacTCP DNR has to look like a control panel, even though it actually isn't one. Specifically, it has to look like the MacTCP 1.0.x control panel, which had a creator of "mtcp."

- Since they're looking for it in the System Folder, MacTCP DNR has to be in the System Folder, even though control panels would normally go in the Control Panels folder.

- Since the reason they're looking for it is to get a "dnrp" resource out of it, it must contain a "dnrp" resource—but not just any "dnrp". Since it's necessary for all programs to be using the same DNR, the "dnrp" resource in MacTCP DNR must be an exact copy of the "dnrp" resource from the TCP control panel. To make sure it's an exact copy, the TCP control panel puts a fresh copy there on every startup. It's putting that fresh copy there that makes the modification date keep changing.

- Since MacTCP DNR isn't really a control panel, the user must not be allowed to open it. Fortunately, there is a mechanism in the Finder for that. Whenever you try to open something in the Finder, one of the first tests Finder makes is whether the file contains a "STR" resource with the magic ID of -16397. If it does, Finder refuses to open the file, displaying instead the contents of that resource as the reason. MacTCP DNR has such a resource. The easiest way to read it is to double-click on MacTCP DNR.

A Guided Tour

You can see all this for yourself. Open up MacTCP DNR with ResEdit. You'll see that it contains exactly two resources: "STR" -16397, which you can verify contains the same message you got from double-clicking, and "dnrp" 0, which you can verify is identical to the one in the TCP control panel.

If you have ever run classic networking on that system, you may see two additional resources that MacTCP (v1.1 or later) puts in there that TCP/IP doesn't bother with: an "hfdrr" resource that provides balloon help for the file, and a "dnsl" resource that is identical to the same resource in the MacTCP control panel and contains the list of domain name servers that you entered there.

And that's it. There is nothing else in MacTCP DNR. There is nothing to get corrupted, and even if it did, it would be fixed on the next restart because everything important in the file gets replaced during each restart anyway.

And it wouldn't matter if it were corrupted, because no one is still running Internet applications that are six years old. The song and dance about creating MacTCP DNR and copying resources into it was introduced with MacTCP 1.1, the first System 7 version of MacTCP. That's also when the creator changed from "mtcp" to "ztcp" (as self defense, so there would be no confusion if MacTCP DNR got moved into the Control Panels folder).

Learning the Rules

"Okay," you say. "The rules changed with System 7. But what of programmers who didn't get the word? Won't their programs still use the old rules?"

Actually, no. Rather than spell out the rules to the programmers, Apple embedded them in a file called `dnr.c`, which they distributed to all developers, even developers using non-Apple development systems. All a programmer had to know was that if he or she included `dnr.c` in the project, then the DNR would be there when needed. That file, `dnr.c`, was updated in 1991 to look first in the Control Panels folder, and then in the System Folder (so new programs would still work if running under System 6). Before 1991, it looked only in the System Folder.

All a programmer had to do was recompile the program, any time after 1991, and it would automatically look in the new place. The only programs that still look only in the System Folder, the only programs that will ever use MacTCP DNR, are those programs that have not been recompiled since 1991.

Netscape has been recompiled since 1991. Eudora has been recompiled since

1991. NewsWatcher has been recompiled since 1991. Fetch has been recompiled since 1991. It's a good bet that any Internet application you have has been recompiled since 1991 (and probably within the last six months). None of them will even glance at MacTCP DNR.

(Exception: HyperCard stacks may contain XCMDs that were compiled god-knows-when. Nobody ever bothers to update XCMDs. If you have a HyperCard stack that resolves domain names, there is a distinct possibility that that stack uses MacTCP DNR. But who still uses HyperCard to access the Internet?)

In Case of Doubt

Try it yourself. As long as you have MacTCP DNR open in ResEdit, play with it. Alter resources to your heart's content. That "dnrp" resource is executable machine code. Change a few bytes. Write your name over it. Change the "STR" resource to say "Hunsinger was here!" Save your work.

Double-click on MacTCP DNR. See the witty comment. Log onto your ISP. Run all your favorite applications. Notice that everything still works. Nothing crashes, even though you've butchered executable code.

Then restart, and notice that your mess has been cleaned up, all by itself.

Summary

- MacTCP DNR isn't likely to get corrupted. It's only updated at system startup.

- If it gets corrupted, no matter. The corruption will be repaired on the very next system startup. You never need to trash it. The system will trash it for you.

- If it somehow doesn't get corrected, still no matter. Nobody uses it. (Hardly anybody.)

So quit picking on the little guy! 

Ron Hunsinger

Buying a Mac at Macworld of All Places!

by Vance and Chris Bennett

BMUG member Vance Bennett and his 13-year-old son, Chris, write about their Macworld adventures.

Vance: I had been limping along with a Mac IIcx for several years, and it was increasingly showing its age. As I started doing more complex things on my computer, its slow speed started getting in the way of getting work done. Oh, no need to elaborate. Every Mac user has been faced with the same dilemma, only now it's different. In the recent past, a new Mac would have set you back several thousand dollars. Not so as Macworld approached. Prices were down. It was time to get a new one.

Chris: Yeah it was slow, especially when I tried playing games like "A-10 Attack" and "SimTower." It would always crash right when it started to get good. I also couldn't get some of the cool games that were out because they required a 68040 processor or higher.

Vance: I could easily see the merit in this, but my wife was rather skeptical. She thought the old one worked just fine. (Of course, when the only program you use is WriteNow, any Mac seems blazing fast.) I knew, though, that victory was in sight when she became the treasurer for our church. After spending several months watching Quicken perform with glacier-like speed, she was ready for a change. At the same time that I had convinced the family that we needed to upgrade, my son decided he wanted to go to Macworld for his 14th birthday. Why does a 13-year-old want to go to Macworld? Games!

Chris: That's absolutely right. The only reason to go there was for the games. Other than that, I wanted to get a lot of free junk that I could try out on our new computer.

Vance: Being the practical dad, I thought it would be a good chance to do some serious shopping for a new computer while giving the heir to the family fortune his birthday wish.

I started to do the necessary convincing for my wife, who was still somewhat skeptical. "Oh, they have great deals there! We can save big bucks!" So went my argument. It was beginning to have an effect then the dishwasher decided to die. The money I had saved for our new Mac now looked like it might get committed to a higher-priority project. Undaunted, my son and I headed north.

Inno cent s A broad

Chris thought it was a great trip. On the way up we saw one car flip over and end up in a ditch. Getting closer to San Francisco, another car ran smack into a big package of fiberglass insulation, scattering fluffy yellow stuff over a couple miles of Highway 101. The clueless driver kept right on going with fiberglass covering the front of his car. This is great stuff when you're 13, but I was wondering if maybe all this mayhem wasn't a bad omen.

We got to Macworld and found that it was everything we had hoped for. Chris had a near-endless choice of games to try out, and I was in the center of Mac nirvana. He immediately headed for the Parsoft booth to try his hand at A-10 while I went shopping. (By the way, if you were at the Parsoft booth playing A-10 and some auburn-haired kid with a Giants cap on blasted you out of the sky, then you met my son. Nice kid, huh?)

Chris: It was kind of strange at first, because I expected a ton of games and a few booths with computers. But boy was I sur-

prised! There were tons of people and booths that weren't just games.

You C an 't Always Get W hat You W an t

Vance: It was at this point that I ran into my first problem in my quest for a new Mac: It's hard to find everyone who is selling Macs. For some reason, event programs were difficult to find. It took me several hours to find one and get an idea of who was there, and there doesn't seem to be any rhyme or reason to the way they place the exhibits. You had to do a lot of walking to find every place selling Macs.

It's hard to find everyone who is selling Macs.

Some of these people
don't have a clue about
customer service.

So where was the boy while I was wandering the aisles?

Chris: Parsoft Interactive, where they had a network game of "A-10 Cuba." I spent most of my time there, where I had to be pried away from the joystick by my dad so someone else could have a turn at it. I couldn't believe how many people were there. There were at least thousands of people there, and I was surprised to see how many kids my age were there with their parents. Another game that I enjoyed playing a lot was "Descent 2," where you fly a spaceship

through the depths of an alien planet and try to destroy all of the aliens.

Vance: It kept him busy.

Chris Scores Big

I was making progress with my search when Chris found a new game—and a sure-fire way to win a free T-shirt. He had been playing a networked game at one developer's booth. They had three Macs hooked up, and the players competed against each other for T-shirts. This developer was a little more organized than some others: Rather than just leave players to their own devices, it had a sign-up sheet for its ongoing contests. You signed up for a certain time, showed up at the appointed hour, then blasted away with two other people. Chris the schemer immediately calculated the odds of winning and found that his odds would improve greatly if he only had to shoot it out with one other person. He persuaded me to sign up with him so he would have only one real opponent. He dreamed up two scenarios:

1. He and I could gang up on the other player and make him eat copious amounts of hot lead.
2. I could allow myself to get blasted to smithereens in the game so he would only have to worry about the third player.

Given my general ability with shoot-'em-up computer games, I elected to employ strategy No. 2. He won his T-shirt easily. After making the ultimate sacrifice, I resumed my quest.

Chris Gets Bored Stiff

Between checking up on Chris at the various game demos and surveying the layout, I had taken over two hours to get an idea of what was where. By then, it was time to call it a day and head for Tommy's Joynt for some buffalo stew with a friend who works in San Francisco. It was then that I found it was easier to teach a 13-year-old to fly an A-10 than it was to get one to eat buffalo stew. Maybe next year...

Chris: It was really boring when we were at that strange place. It wasn't that bad though because they had a college basketball game on TV. So that is basically all I did the whole time aside from eating a humongous turkey sandwich.

The Tough Go Shopping

Vance: The next day I started my shopping

in earnest, and Chris resumed his reign of terror in the skies over Parsoft. Being inspired by my son's warmongering, I decided I would start my quest at the booth inhabited by a particularly aggressive company that was making a lot of noise about kicking some serious butt to sell Macs. It was then that I ran into my second problem trying to buy a Mac at Macworld: Some vendors seemed to be in no hurry to sell any.

You Want What?

The Jedi Knights of Macworld had what looked like 30 computers out as demos and even more people staffing their bunker. The only trouble was, none of these people seemed really interested in getting me to buy one of their products. In fact, none of them seemed terribly interested in even acknowledging my presence. I wandered around the area looking at computers and reading brochures while the quasi-Marines chatted with each other, looked bored, and ignored me. For all these people knew, I could have had a MasterCard with a limit higher than the gross national product of some third-world countries. It didn't seem to matter. They just wouldn't give me the time of day. I was impressed with their products and liked the prices enough that I would have whipped out my charge card for the first person who asked if I wanted to help them stamp out the Wintel oligopoly. None did, so the MasterCard stayed put.

I pondered this while wandering among the sandbags and tried to come up with a solution to their problem. "These people need some training," I thought to myself. The usual route a company would take would be to hire some high-priced consultant who would spend days getting groups of employees in a room and having them hang flip-chart paper on the wall. While waiting for a salesperson to take note of my interest in their product, I came up with a better idea. The company should give all of these folks a \$50 gift certificate to WalMart and let them see what real customer service is all about. It would be a lot cheaper than a consultant, wouldn't waste as much flip-chart paper, and they would probably get a good deal on some new underwear. Even though I stayed long enough to appear at least mildly interested in buying, nobody seemed interested in selling. Like that guy at the O.J. trial said: "Something wrong here!"

Great Deals!

"Maybe I'll have better luck with some of the retailers," I thought hopefully.

The first dealer I talked to had great prices and had product in stock. It could have had the computer at my house waiting for me when I returned home from Macworld. Just what I wanted! Then the salesperson tried to talk me into placing my order via an 800 number so he wouldn't have to fill out all that paperwork.

Problem No. 3 of buying a computer at Macworld: Some of these people don't have a clue about customer service (and why all this darn paper at one of the world's largest computer trade shows?). I thought maybe I was just dealing with one exceptionally lazy salesperson, so I decided to go on to another vendor and give these people a try later. (More candidates for WalMart gift certificates.)

Some of these people don't have a clue about customer service.

All Is Not What It Seems

Authorized Apple Dealer (keep this phrase in mind) No. 2 also had even lower prices. It could deliver just as quickly as the other place could. While standing in line to place my order, however, I started to notice a lot of disturbing fine print and asterisks on its ads. These great prices all depended on my buying other stuff that would qualify me for various Apple rebates or other special deals. I didn't feel like tracking down a CPA to break down these alleged good deals to see if I was really saving money, so I left the scene and continued my search.

Dealer No. 3 had good prices and a bunch of products in its booth. It also had long lines. I hung around for a while, and it seemed to be on the up-and-up. It also looked like the long lines were due to happy customers getting the stuff they wanted at good prices. People handed over credit cards and got merchandise in return. No complex deals, no 800 number. "Put a check mark next to their name," I thought.

I tried the Marines again with the same result. I wandered off after spending a few minutes getting bored and watching sales people acting bored. Something wrong with this picture.

Onward into the other hall. In some small booths I found some great deals. Prices that were beyond low—they were

Some of these people don't appear to be on the up-and-up.

rock bottom. Some were almost \$1,000 cheaper than some of their competitors. I thought I had struck pay dirt when I asked the question that seemed to induce an acute case of lockjaw: "Are you an Apple Authorized Dealer?" The response was usually some sort of mumbling double talk or just plain evasion. I interpreted this rather convoluted response as "no." Problem No. 4 of buying a Mac at Macworld: Some of these people don't appear to be on the up-and-up.

Some of these people don't appear to be on the up-and-up.

I wandered around for a few more hours finding more such booths. They were easy to spot after a while: small booth, low-budget signs, low prices, and a shift-eyed person behind the counter with little ability to supply straight answers to simple questions (e.g., "What about a warranty?"). Nobody seemed to be doing much buying at these places. A lot of people were looking, but most of them seemed to be in the same condition as me: skeptical.

Our time at Macworld was getting short, so it was now time to get serious. I narrowed down my search to a handful of vendors, one of which was the major clone maker with the inept sales staff. I tried to give them one last try (I'm such a forgiving person). To my utter amazement, I actually found someone willing to talk to me. (She must have been new.) I was getting ready to make a decision when I asked the fateful question, "When can you deliver?" Four weeks, maybe...

I'm Outta Here

As I was strolling away, I began to wonder if I had done the right thing. Great prices, a lot of features, excellent software bundle; what else could I want? I then began to recall some of the stories I had heard about this company. Missed deadlines, dead-on-arrival products, products

shipped to the wrong address (or the wrong state!), phone calls that didn't get returned. As I was pondering this rather spotty record, I recalled the words of an executive in an interview he gave for MacWEEK. He spoke of an "acceptable level of quality." Acceptable to who? Not me. Back to one of the big dealers.

My first stop was the place where the salesperson wanted me to call an 800 number to place an order rather than fill out a little paperwork. I looked for another salesperson (not hard to do—they had plenty) and gave it another try. Same result. I asked the person why I should call an 800 number rather than give him my order on the spot. He explained that they didn't send in the orders until after the show closed, so if I called their 800 number I would get my order in sooner. Such nice people. They weren't really lazy; they were looking out for my best interest. At that point I got skeptical again. Here I was, in one of the largest computer trade shows anywhere, with an endless number of displays and live hookups to the Internet, and I'm talking to a company that can't seem to let go of green eyeshades and stubby pencils. I decided to press on. Back to the booth with the mob scene.

Let's Get Serious

I had pretty much decided to buy a computer from this place, and I had decided I wanted a Performa 6400/200. But before plunking down my hard-earned cash, I wanted to see if these guys knew their stuff. I got in line and worked my way up to the front. I told the friendly salesperson that I wanted to buy a Performa 6360. He quickly explained how the 6400 was faster, had more PCI slots and (most importantly) was on sale. The sale price made it less expensive than the 6360. (I already knew all of this, but I wanted to see if he did.) His concise, matter-of-fact explanation lacked the condescension you often find in such situations.

(Note: Apple was also offering some serious deals on Performa 6400s to clear out the excess inventory from poor holiday sales. I think this may have had something to do with the salesperson's willingness to sell me a 6400. I recommend keeping this in mind when shopping for a computer. A salesperson's enthusiasm about a particular product is often more closely related to how much money they will get out of the

sale rather than what product may be best for you.)

Not Over Till It's Over

I left with a new Performa 6400/200 and ran into Problem No. 5 of buying a Mac at Macworld: getting the thing home.

Chris and I carried the thing back to our hotel (four blocks away) through some of the seedier neighborhoods in San Francisco and lived to tell about it. He thought it was fun. I had a different point of view. We got to the hotel safely, put the computer in the car, and headed for home.

Chris: It was like a separate adventure just lugging that thing through San Francisco and driving it to our house in the middle of the night. When we started out of San Francisco, I immediately opened up the box. It was pretty cool because we got a whole bunch of CDs and other stuff that came with it. The only problem with opening it was that every time we hit a bump, I hit my head on the light on the top of the car.

Vance: So what did I learn from my experience? Shopping for a computer at Macworld isn't much different from shopping for one anywhere else. There are some great deals, some excellent companies—and some of the other variety. The only difference is, at Macworld they are all under one roof. With a little bit of walking I got a good deal, and we are very happy with our new computer. Also, Chris is ecstatic with how fast it plays his new games. I guess it pays to keep it all in perspective. 

Vance Bennet is an Emergency Management Instructor for the Governor's Office of Emergency Services and a Mac user since an SE was one hot machine. You can contact him on the Planet or at VanceB4660@aol.com.

Chris Bennet is an eighth-grade honor student (couldn't help bragging) at Paulding Middle School in Arroyo Grande, CA. You can contact him at Chris_B_AG@aol.com. Sometimes he even lets Dad use the new computer to do real work.

Has Your Mac Been Abducted by Aliens?

Or Is It Just a Bad Battery?

by James A. Sugar

Those of you still using 040-series Macs (and you know who you are): Have you ever had a bad day when your color monitor defaulted to a black-and-white image with every reboot of the CPU? Did you suspect that the mind of your computer had been abducted by aliens?

Or perhaps your printer suffered from a series of erratic, unexplainable problems? Did you think it was the victim of demonic possession?

Well, Bunky, I've been there. Done that. Read on, and perhaps I can solve your problems.

Shortly before I sat down to write this article, my trusty old Quadra 700 developed an annoying tic. With every restart, the monitor would no longer display 24-bit color. On each trip to the Monitors control panel, I found that the machine had reverted to black and white. While I could reset the machine to millions of colors, the CPU continued to display in black and white with every reboot.

This nonsense continued for about a week. Then it got worse.

In the midst of one particularly intense session, the machine completely shut down. At first I thought PG&E had cut off my electricity, or perhaps my 9-year old son had secretly pulled the plug. But while the monitor and the internal hard drive had quit, all the other SCSI devices were still grinding away.

As I tried to contain my concern and disgust, I swore that I could hear aliens laughing in the background.

Still, the worst was yet to come.

Although I was able to reboot the machine immediately (with a black-and-white display on the color monitor), the

machine quit again five minutes later. The third time it shut down after only two minutes. Finally, despite pleading and genuflecting in front of my CPU, it would not restart at all.

The aliens were winning.

After a few calls for help to fellow BMUGers, I found a company called MicroMat Computer Service in Novato, CA. There, the manager, Steve Beale, told me



what was afflicting my computer.

"You've got a dead PRAM battery," Steve said. "I've already replaced 10 of them this week."

Huh? What battery?

"You've got a dead PRAM battery." Huh? What battery?

It turns out that all Macintoshes containing the Motorola 68040 processor (i.e. Quadras), plus all Mac II's, the IIx's, LC's, the SE, Performas, some early PowerPC's, and PowerBooks contain one or two 1/2 AA, 3.6-volt batteries which regulate the PRAM, or Parameter RAM. (Some Performa models use a 4.5-volt alkaline battery.)

When this little ol' battery loses its poop (usually after two to four years), the settings in the general Control Panel go haywire-and the computer behaves erratically. Eventually

the Mac won't run at all.

This tiny battery stores all the PRAM settings in the Mac's control panels such as the date and time, Monitor, memory cache, Chooser, desktop pattern, mouse tracking speed, and sound level. But unlike the Heartbreak of Psoriasis, which exhibits predictable problems, no two computers display the exact same symptoms as the battery begins to fail.

I've already described the decline of my Quadra 700. According to Steve, other symptoms include:

- Previously unseen printing problems, including the total inability to print.
- The current date reverting to August 27, 1956 (rumored to be Steve Job's birthday) or 1/1/04 in most PowerBooks.
- 32-bit addressing changing from off to on or vice versa.
- The mouse speed reverting to its Slow setting.
- A change in the Chooser setting.

From his small shop in Novato, Steve Beale serviced 300 computers with this problem in 1996. In a normal week he changed 10 to 20 batteries.

Like most other problems relating to computers, there is a solution-if you are willing to invest time, energy, and money. But here's the good news: for a mere \$25 and about 30 minutes of your time, you and your favorite Macintosh can be back on your way to happy computing.

I only wish that discovering the truth about the aliens was as easy. 

James A. Sugar

How Scripting Saved My Butt

by Bruce Linde

It All Started When...

Last year I thought I'd do something useful and convert BMUG's Choice Products listings from their FileMaker database home into web pages for BMUG's web site. The only real tools I had at hand were QuickKeys (which lets you record oft-repeated actions and save them as 'macros'), FileMaker, Microsoft Word 5.1a, and some determination.

First, I set up a new layout in FileMaker that had only two fields: Product Icon, and Product ID Number. I then created a QuickKeys macro that would essentially do these things:

1. Command-Tab to the next FileMaker record (having previously tabbed the cursor to the ID Number field).
2. Tab to the Product Icon field.
3. Copy the icon to the clipboard.
4. Switch to GifConverter, and paste the icon into the open window.
5. Switch back to FileMaker, and tab to the Product ID Number field.
6. Select all, and copy to the clipboard.
7. Switch back to GifConverter and select 'Save As...'
8. Paste in the clipboard contents, and add '.gif' (having previously selected the right folder, and file format)
9. Repeat 250 times

That got me a folder filled with the 250 or so icons converted from pict's to gifs.

Then, I added a bunch of fields to the FileMaker database (aaa, bbb, ccc, etc.) and filled them all with their names (i.e., aaa contained 'aaa,' etc.). When I set up to export the text, I exported the Product ID Number field followed by the aaa field, Product Name 1 followed by bbb, Product Name 2 followed by ccc, etc.

I then did a whole bunch of creative Search and Replace in Word—having the aaa's through Ill's gave me lots of options

for searching and, of course, there were the tabs from the tab-delimited text export.

For example, I knew that each record would be going in an HTML table row. Every row in an HTML table needs beginning and ending table row and table cell tags. Using Word's Search and Replace window I searched for "^p" (the paragraph at the end of each record exported in the text file export from FileMaker, and replaced it with "</TD></TR><P><TR VALIGN=TOP ALIGN=Center><TD>." This translates to "end of the last data cell </TD>, end of this row </TR>, give me a paragraph <P>, start a new row <TR VALIGN=TOP ALIGN=Center>, and start a new data cell <TD>." This dealt with the end of each line, and the beginning of the next one.

Since I had unique combinations of tabs and individually named (and filled) fields (such as 'aaa,' 'bbb,' etc.), I was able to work my way through the info and have Word do most of the work of the HTML tagging for me.

I then had to manually cut and paste the right rows into the right HTML pages, and hope I didn't make any mistakes. The whole process took about three days, and the pride of creation allowed me to ignore the fact that, while I had been able to get my computer to do a lot of the work for me, I still had to do the bulk of it. As I say every time I help someone move a piano, never again!

So This Year...

This year I vowed to figure out how to make the conversion of the Choice Products database into web pages automatic. I was out of work, and rationalized that I would rather be trying to learn something than looking for work. I went to the BMUG office to reconnoiter, and ran into Richard Pfeiffer, the leader of BMUG's Scripting SIG. He pitched scripting to me as the answer.

He said that scripting would allow me to do what I had done last year, but with infinitely more control and intelligence. I

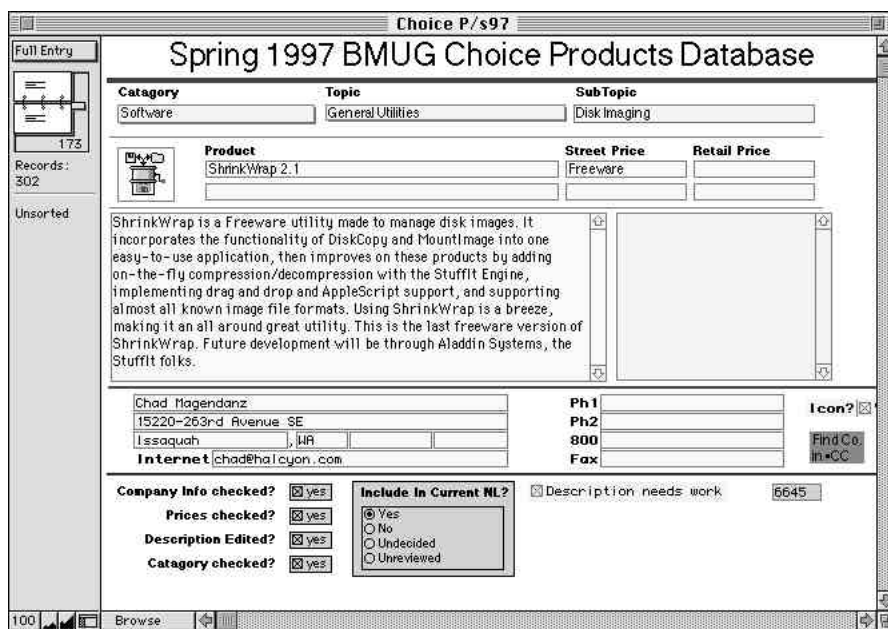


Figure 1.A typical record in the Choice Products FileMaker database.

asked him if AppleScript might be the ticket for what I wanted to do, and he told me it would be no problem.

I found out later that he meant no problem for him, but I nevertheless set out towards my new goal of learning AppleScript. What better place to start than *The Tao of AppleScript*, by BMUGers Derrick Schneider, Hans Hansen, and Tim Holmes? As I read the book I began to understand that AppleScript would let me automate the Choice Product web page production, using what (at first) appeared to be pretty straight-forward language. I won't go into the details quite yet, but with AppleScript you can actually say things like "Tell the application FileMaker to Quit" or "Save the front window of application BBEdit."

Tools...

Apple's Script Editor proved to be somewhat useful, but a bit of a dud. The first thing I tried was selecting some text and Option-Dragging it to duplicate it ... but Apple's own scripting tool doesn't support Drag and Drop! The second disappointment was finding out that Script Editor itself was not scriptable.

If an application is scriptable, you can record its actions and then read the AppleScript code to figure out how to get what you want. For example, you could record your word processor as you bring

the back window to the front, stop recording, and find out the right syntax for doing this.

The Software: Backup page has two records. All of the information from the FileMaker database is there, with similar formatting.

I got a copy of Scriptor, which is one of the commercial AppleScript editors out there (Richard uses another one, called "Script Debugger"). It supports Drag and Drop, and also has a nifty utility that lets you put AppleScript statements together based on each application's "dictionary." I should mention here that scriptable apps have dictionaries that list the verbs (print, save, close, etc.) and objects (window, menu, document, etc.) supported.

Unfortunately, reading the dictionaries for different applications led to what I call "the third realization."

The Third Realization...

The aforementioned third realization was that despite the fact that AppleScript code reads almost like English, the emphasis in the sentence is on "almost"—every application requires a slightly different (although at times frustratingly similar) syntax ... and one misplaced word or parenthesis will stop you dead until you figure out the problem.

Also, I uncovered this little tidbit in Netscape Navigator's dictionary for versions 2.0 and 3.0. For the "Go" verb: "Go: navigate a window: back, forward, again(reload), home)." This is wrong. If anyone knows how to make this syntax "tell window 1 to go back" atotic@netscape.com would like to hear from you. Encouraging, yes?

Anyway, through much perseverance I managed to make it all work, and my completed AppleScript would repeatedly and correctly turn a 303-record FileMaker database into a hundred or so HTML pages, with a folder full of the required supporting graphics.

Despite the fact that
AppleScript code reads
almost like English, the
emphasis in the sentence is
on "almost" ...

How It Worked...

The only hard part of the process was figuring out the exact syntax required to make the AppleScript work. I knew that:

1. The Choice Products home page would list the four categories (Computers, Hardware, Software, Resources).
2. Each sub-page would have the same basic header, with the names changed appropriately (e.g., Hardware: Modems, Hardware: Input Devices, Software: Plug-Ins, etc.).
3. If the next FileMaker record contained a product or company that was in the same category as the last record, the script needed to add the info to the right page.
4. If it wasn't the same category, it needed to start a new page, name it correctly, add a link to itself on the home page, and then come back and add the specific info from the database record.
5. Cycle through all of the records.

Using AppleScript I was able to build intelligence into the data processing, so that if a product's street and retail prices were listed it would put a slash between them, but if only one (or none) was listed it wouldn't. These little touches helped make the site very clean and consistent.

Duncan...

I met Duncan while in my initial AppleScript immersion; he came to the BMUG offices to donate a microphone for use with BMUG's public address system which is (used for Main Meetings and SIGs). We started talking, and when he

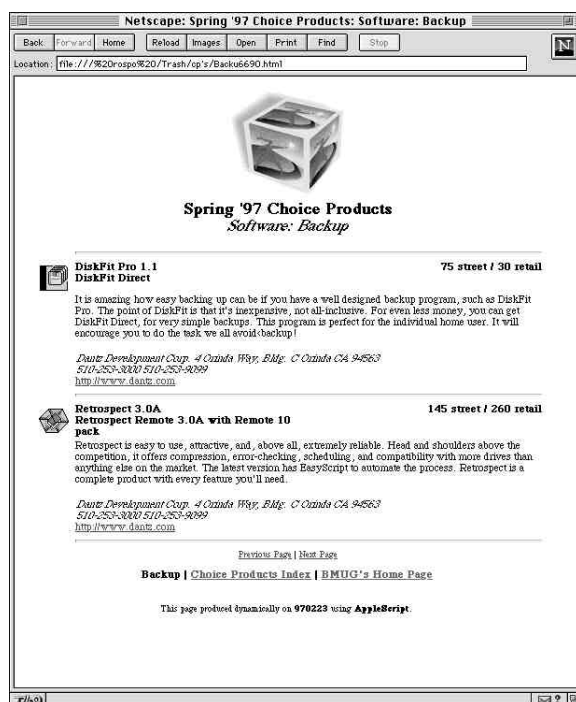


Figure 2.

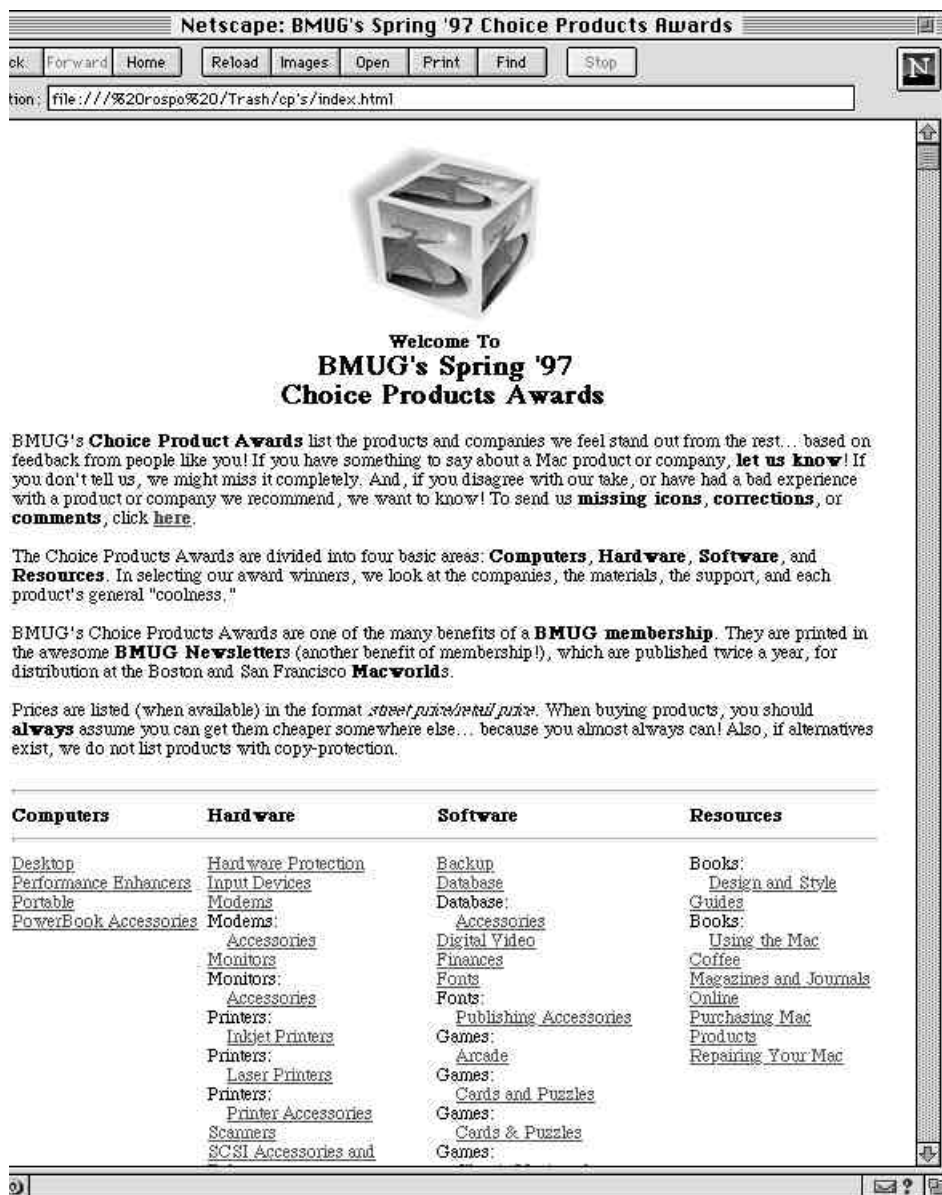


Figure 3. The Choice Products home page, with blurbage and all of the pages listed under the appropriate topics. This page was generated dynamically by the script!

asked me what I did, I told him all about my recent success with scripting.

He told me that mine was an interesting and synchronistic story, because he was the technical webmaster for the California Medical Association, and that the database he was managing kicked out a 900-page web site from scripts—every day! To make a long story short, I ended up working for Duncan on the CMA site, and our partnership has continued through a couple of other jobs. BMUG rocks!

So anyway, Duncan looked over the Choice Products pages and says, "Where are the 'last page' and 'next page' buttons?"

Since I was calling myself a scripter I couldn't really run away and hide just because I didn't know how to implement this, but I set out to try.

I spent three days banging my head against the wall trying to modify my beautiful little script to add the 'last' and 'next' links logic, until I realized a fundamental truth: I had implemented the logic I had set out to implement, and it worked. Trying to change it after the fact to meet new requirements really required either a complete re-write, or a new look at how I might implement this.

I suddenly realized that my script had

Using AppleScript I was able to build intelligence into the data processing,

kicked out a folder full of web pages, and that I could, in several short lines of code, use AppleScript to add the links by telling the Finder to step through that folder, note which were the 'last' and 'next' files, and then tell BBEdit to insert the correct links. This solution took 15 minutes to implement!

Last Year I Couldn't Even Spell C-O-D-E

So Duncan and I just finished up Phase I of the Weider Fitness Online Web Site database engine, which tracks users by user id's and passwords, and retains workout preferences, searches online workout articles by category, etc. We wrote it in JavaScript, which was then compiled by and run using Netscape's Livewire.

In less than two months I had made the transition from knowing nothing about scripting to being able to code for 28 hours straight, sustained only by Vienna Fingers cookies! Is that progress or what?!? 🍪

Bruce Linde

QuicKeys

CE Software, Inc.
PO Box 65580
West Des Moines IA 50265
<http://www.cesoft.com>

The Choice Products pages can be found on BMUG's web site (<http://www.bmug.org>). The Scripting SIG meets in the BMUG offices every month, and has a SIG page on the web site..

I Need More Memory

by Stanley Fierston

Close all open windows and DAs,* your computer barks at you. But all the windows are closed. No DAs are open. Many Macs have been sold with minimum memory. When you try to open more than a program or two you may run into memory limits.

I had this problem with my PowerBook. With 4 megs of memory, I routinely got this threatening message after I installed System 7.1. I usually ran Microsoft Word but when I tried to open a fax program with Word running, my computer wouldn't allow it. I got a message that only a few hundred K or so of RAM was needed to run both of these programs. What to do?

I wanted to use these programs now! Not wait until an order for more memory was filled—not wait until this new memory was installed.

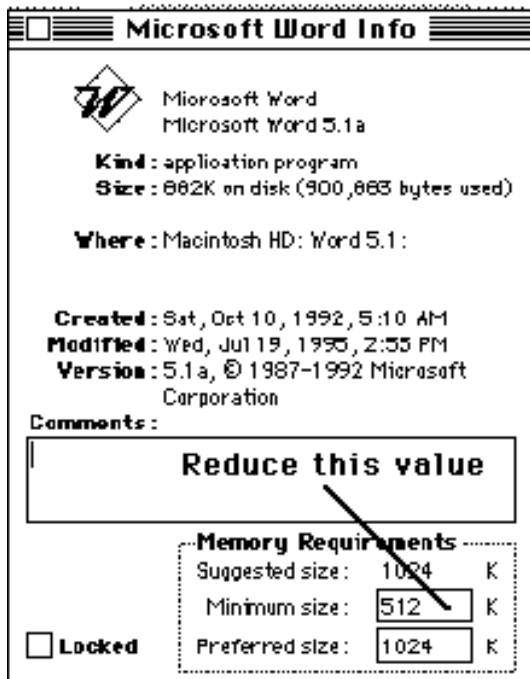


Figure 1. Get Info Box

If all you need is a small amount of room to run a program, check the Get Info box under the File menu with the program's icon selected. Figure 1 shows the Microsoft Word Get Info box that appeared on my screen.

I reduced the minimum size number by 512K and the fax program worked and so did Word! It's important to reduce this minimum size number as little as possible,

Virtual memory is the best way to increase your RAM size quickly

and test the program after you make the change to make sure it still operates properly for you. If it doesn't, increase the size and hope the other program still runs.

I had another memory problem when I tried to load a new program. The loader needed more memory and the scheme I had used before didn't apply to this case. But there was another method I could try.

I could start the computer with the shift key depressed. That move kept the extensions from loading. They can really add up. In my case the extensions occupied over a megabyte of memory.

When I stopped the extensions from loading, the loading program I wanted to run had the space it needed to operate. You must be careful though if you need any of these extensions to run your system—one that operates your CD unit, for exam-

ple.

Keep only the ones you need. Use the Extension Manager to selectively shut off the unwanted ones. You can make some of this permanent by getting rid of the extensions you do not really need.

Keep only the extensions you need.

If you are using System 7 and a later version of a 68xxx processor (or a PowerPC), virtual memory offers a quick way to increase your effective RAM size. Look at your control panel devices and locate the memory panel. Figure 2 shows

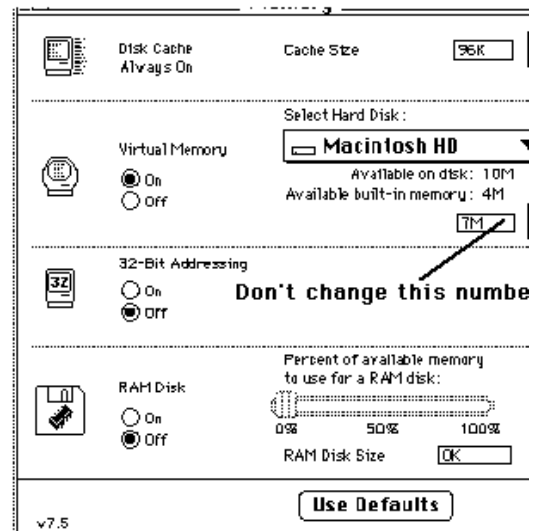


Figure 2. Memory Control Panel

this panel with the virtual memory selection. If your panel doesn't have this virtual selection, you're probably out of luck. You most likely have an older processor or do not have System 7.

The virtual memory actually uses your hard disk and a lot of fancy footwork to make your computer believe the RAM is bigger. There are limits to this trick though. If you try to more than double the effective RAM size—even though you have a big hard disk—your computer will slow down radically.

If you have 4 megs of RAM and spare hard disk space you can increase your effective RAM size to about 8 megs. When you turn the virtual memory on, the computer automatically picks the maximum memory size you can use. The size depends on the amount of RAM in your machine and available hard disk space. Do not pick another number unless you understand the consequences. There is a computer speed reduction, though. Try it and see if the computer works OK for your use.

Each method has its problems. If you reduce a program's minimum memory size, you must be careful you haven't affected the program. If you turn off the extensions, you must be careful to leave the ones you need to operate. And if you use virtual memory, you must make sure the computer doesn't slow down too much.

If you can use it, virtual memory is the best way to increase your RAM size quickly and without spending any money—two good reasons for trying it.

Virtual memory is the best way to increase your RAM size quickly. 🚧

Stanley Fierston is a retired electrical engineer. Most of his work involved computers, from early vacuum tube units to the latest machines. This computer-use concentrated on real-time systems, ranging from telephones to large radar installations. His Mac LC with 10 megs of RAM has more memory than all the systems he built at work.

Why Do People Set Up Personal Web Pages?

by Phil Shapiro

The idea of a personal Web page is intriguing in many ways. At first blush, the idea seems wholly self-indulgent. “Why would anyone want to tell the world about themselves,” is a common first reaction. I, too, thought personal Web pages self-indulgent—until I started visiting some on the Web. What I found was real people daring to explore a new form of expression, unashamedly telling the world who they are and what they care about. In truth, personal Web pages are a whole new form of self-expression. Even people who have personal Web them might not comprehend their full meaning. This article explores some of the ramifications of personal Web pages—and the reasons why a person might choose to have one.

One reason someone might set up a personal Web page is that they feel their résumé doesn’t accurately reflect who they are. A personal Web page can be infinitely richer and more detailed than a résumé. And it can include recorded music, book reviews, scanned color artwork, recorded poetry, whimsical humor, children’s stories and a whole bevy of other indications of who you are. If résumés are one-dimensional, black and white representations of human beings, then personal Web pages can be multidimensional, multicolored representations. If you have ever looked at your own résumé and immediately reacted with the word “harumph”, you’re well on your way to setting up your own personal Web page.

Another reason someone might choose to set up a personal Web page is that they get tired of having to explain about themselves. It takes real effort to have to bring someone up-to-date about who you are, what you care about, and what you’ve done

in your life. At the very minimum, it takes about two hours to tell someone you’ve just met about your background and interests. Think of the times you’ve met someone new and how tiresome it can be to have to launch into your entire life story. Set up a personal Web page, and skip all that repetitious yapping. People speak at about 300 baud, and read at about 9600 baud (or faster). If someone is interested in learning about your background or interests, they could do it thirty-two times faster by visiting your Web page than by sitting down to talk with you in person.

Wait, wait, wait, I can hear the objections already. Sure, there are good reasons for people to sit down to talk with one another face to face. But it can be tiresome, boring, and repetitious for people to have to explain the same things over and over again to each and every person they meet. Each of us is given a fixed number of minutes on this planet. We need to cut out the repetitious talking and move on to the more meaningful conversations, or risk being condemned to small talk for the rest of our short lives.<soapbox mode, off>

Other reasons for setting up a personal Web page? They let people quickly find out who you are. Last month I sent the *Washington Post* newspaper a letter to the editor. Two days later I received a phone call from a technology editor at the *Post*, verifying information in the letter. The editor happened to mention that his dad and my dad might have worked together in UNICEF in the 1950’s. How would he know that? From my Web page.

My Web page also serves as a fast “authenticator.” My letter was on a topic relevant to my work, and my Web page let the newspaper to do some fast fact-checking. Along the same lines, a personal Web

page can serve as an “authenticating” device when people buy or sell second-hand items over the Internet. If you’re going to send money to a seller, wouldn’t you feel more comfortable if you could first browse their personal Web page? Likewise, wouldn’t you feel more comfortable first browsing a buyer’s personal Web page before sending them your valuables?

Becoming Connected to Others

Often we journey through life knowing little about each other. You probably know little about any of your neighbors. You could live for fifty years on the same street and be unaware that one of your neighbors shares some of the exact same interests as you. Truth is, most of us don’t have a clue about each other. Even close friends continually surprise me with interesting facets of their lives I had never known of before. If these friends had set up personal Web pages telling about themselves, I might have come to know them sooner and in greater depth. I could have learned who they were three years ago, rather than today.

One fascinating aspect of the World Wide Web is that it offers the opportunity to shorten the time period involved in discovering background information about friends and colleagues. By visiting a person’s home page you can find a lot about who they are and what they’re interested in. Why is it important for people to know about each other’s lives? It’s important because otherwise we could all pass through life without the slightest idea of what anybody else is doing. This would be a shame because of the enormous number of missed opportunities for people to connect with each other. The reason personal Web pages are so interesting is that they

allow us to better understand where each of us is coming from. And the more you know about where a person is coming from, the better you'll be able to understand who they are.

Human beings are multifaceted. For instance, I happen to have a strong interest in educational technology. But I'm also very interested in special-needs computing, video production, multiculturalism, philosophy, music, history and ethics. One of my strongest interests is equitable access to technology. I also try to follow the arts, for the arts dignify the soul. My interests and hobbies are all laid out publicly on my Web page. Interests and hobbies are a good starting point for building a personal Web page. But if your Web page is merely a list of interests and hobbies, you're overlooking one of the best tools for letting others learn about you. If you want others to gain a view into who you are as a person, you need to include creative and expository writings on your Web page. How you write, and what you choose to write about, reveal essential clues as to who you are as a person. We live in a world where most of us pass through life oblivious of our fellow travelers in time. The World Wide Web is a powerful tool for making all of us a little more informed about each other.

So take time to learn who your fellow travelers are. Take time to tell them who you are. You may be surprised at the connections that result. 

The above essay is one of thirty essays in the book, *Thinking About Online Communications*. Excerpts of these think-piece essays can be found at <http://www.his.com/pshapiro/taoc.excerpt.s.html>.

Need some ideas on how to make a lively personal Web page? Check out the very witty and amusing Web page of computer columnist Rosalind Resnick: <http://www.netcreations.com/rosalind/>.

Phil Shapiro, Washington DC Regional Coordinator

Community Technology Centers' Network
5201 Chevy Chase Pkwy., NW,
Washington, DC, 20015.

<http://www.his.com/pshapiro/> (personal)

<http://www.ctcnet.org/> (work)

Author, *Thinking About Online Communications*

<http://www.his.com/pshapiro/taoc.excerpt.s.html>

Phil Shapiro is a freelance writer and computer consultant. He recently added RealAudio classical and folk guitar melodies to his Web page, and takes special pride in the whimsical children's stories on his page. He can be reached at pshapiro@his.com and <http://www.his.com/pshapiro/>.

Microsoft Technical Support vs. The Psychic Friends Network:

Which Provides Better Support for Microsoft Products?

by Michael Patrick Ellard and Daniel Albert Wright

In the course of a recent Microsoft Access programming project, we had three difficult technical problems where we decided to call a support hotline for advice. This article compares the two support numbers we tried: Microsoft Technical Support and the Psychic Friends Network. As a result of this research, we have come to the following conclusions: 1) that Microsoft Technical Support and the Psychic Friends Network are about equal in their ability to provide technical assistance for Microsoft products over the phone; 2) that the Psychic Friends Network has a distinct edge over Microsoft in the areas of courtesy, response time, and cost of support; but 3) that Microsoft has a generally better refund policy if they fail to solve your problem.

In the paragraphs that follow, we will detail the support calls we made and the responses we received from each support provider. We will follow this with a discussion of the features provided by each support provider so that readers can do their own rankings of the two services.

Our research began when we called Microsoft regarding a bug that we had detected when executing queries which pulled data from a Sybase Server into Microsoft Access. If we used the same Access database to query two databases on the same server, we found that all of the queries aimed at the second database that we queried were sent to the first database that we had queried. This problem existed no matter which database we queried first. Dan called Microsoft's Technical Solutions

Line, gave them \$55, and was connected with an official Microsoft Access technical support person. As Dan began to explain the problem, the support person interrupted him, and told him that since it was clear that it was not just a problem with Access but with the two programs together, Microsoft would not try to help us. They did, however, have a consultant referral service with which he would be glad to connect us. Dan then asked if we could have our \$55 refunded, since Microsoft was not going to try to answer to our question. The tech support person responded by forwarding Dan to the person in charge of giving refunds. The person officially in charge of giving refunds took Dan's credit card info again, after which Dan asked about the referral service. It was too late, however — the refund folks could not reconnect Dan with the tech support guy he'd been talking with, nor could he put Dan in touch with the referral service hotline. End of Call One.

Our second call came when Dan was creating some line graphs in Microsoft Access. Microsoft Access actually uses a program called Microsoft Graph to create its graphs, and this program has a "feature" that makes the automatic axis scale always start the scale at zero. If all of your data are between 9,800 and 10,000 and you get a scale of 0 to 10,000, your data will appear as a flat line at the top of your graph—not a very interesting chart. Since Dan was writing Visual Basic code to create the graphs, he wanted to be able to use Visual Basic code to change the graph scaling, but he could not find anything in the help files that

would tell him how to do this. After working with Microsoft Graph for a while, Dan concluded that it probably didn't have the capability that he needed, but he decided to call Microsoft just to make sure. Dan described his problem to the technical sup-

Microsoft Bob did call back the following week to admit failure. He could not help us. However, he couldn't give us a refund either.

port person, whom we'll call Microsoft Bob. Microsoft Bob said he'd never gotten a call about Microsoft Graph before. He then left Dan on hold while he went to ask another support person how to use Microsoft Graph. Microsoft Bob came back with the suggestion that Dan use the online help. Dan, however, had already used the online help, and didn't feel that this was an appropriate answer for a \$55 support call. Microsoft Bob didn't give up, though. He

All in all, Ray did not do much to distinguish himself from Microsoft Technical Support. He wasn't able to solve our problem for us, and he wasn't able to confirm or deny that a bug in Microsoft Access was causing the problem.

consulted the help files and learned to change the graph scale by hand and then began looking for a way to do this via code. After Microsoft Bob had spent about an hour on the phone with Dan learning how to use Microsoft Graph, Dan asked for a refund since he had no more time to spend on the problem. Microsoft Bob refused the refund, however. He said he wouldn't give up, and told Dan that he would call back the next week.

Microsoft Bob did call back the following week to admit failure. He could not help us. However, he couldn't give us a refund either. Microsoft Bob's supervisor confirmed Microsoft Bob's position. While Microsoft Technical Support hadn't solved our problem, they felt that a refund was inappropriate since Microsoft Technical Support had spent a lot of time not solving our problem. Dan persisted, however, explaining that if Microsoft Bob actually knew the program, he would have been able to give Dan a response much sooner. The supervisor made no guarantees, but he instructed Dan to check his credit card bill at the end of the month. The supervisor explained that if Dan saw that the charge was still there at the end of the month, then

he would know that he hadn't gotten a refund. End of Call Two.

Our third call to Microsoft involved using the standard file save dialog from within Microsoft Access to get a file name and directory string from a user in order to save an exported file. The documentation didn't make it clear how to do this using Visual Basic code within Microsoft Access, and Dan decided to call Microsoft to ask if and how a programmer could do this. The technical support person he reached told him he was asking about a pretty heavy programming task. He cheerily informed Dan that he'd called the wrong number and advised Dan to call help for Visual Basic, not Access (\$195 instead of \$55). This technical support person was extraordinarily helpful in getting Dan his refund. End of Call Three.

Stymied by our responses from Microsoft, we decided to try another service provider, the Psychic Friends Network. There are several noticeable differences between Microsoft and the Psychic Friends Network. Microsoft charges a flat rate per "solution," which is a single problem and can be handled in multiple phone calls. As described above, Microsoft may or may not issue a refund of their fee if they fail to provide a solution for your problem. The Psychic Friends Network charges a per minute fee. They do not offer a refund if they cannot solve your problem. However, unlike Microsoft, they will not charge you extra if they provide more than one solution per call.

We decided to test the Psychic Friends Network by asking them the same questions that we had asked Microsoft Technical Support. We called them and were quickly connected with Ray, who was very courteous and helpful. Like Microsoft Bob, Ray quickly informed us that he wasn't fully up to date on the programs that we were working with, but he was willing to help us anyway.

We started off with our first problem: making a connection from Microsoft Access to two different Sybase Servers. Ray worked hard on this problem for us. He sensed that there was a problem with something connecting, that something wasn't being fulfilled either in a sexual, spiritual or emotional way. Ray also identified that there was some sort of physical failure going on that was causing the problem. "Do you

mean that there's some sort of bug?" we asked. Ray denied that he knew about any sort of bug in the software. "Are you sure there's not a bug?" we asked. Ray insisted that he did not know of any bug in the software, although he left open the possibility that there could be some bug in the software that he did not know about. All in all, Ray did not do much to distinguish himself from Microsoft Technical Support. He wasn't able to solve our problem for us, and he wasn't able to confirm or deny that a bug in Microsoft Access was causing the problem.

We then asked Ray our question about using Visual Basic to set the axes of a chart. Ray thought hard about this one. Once again he had the sense that something just wasn't connecting, that there was some sort of physical failure that was causing our problem. "Could it be that it's your computer that's the problem?" he asked. "Is this something that happens just on your computer, or have you had the same problem when you've tried to do the same thing on other computers?"

We assured Ray that we had the same problem on other computers, then asked again, "This physical failure that you're talking about, do you mean that there's some sort of bug?" Once again he assured us that there wasn't a bug, but that he didn't know how to solve our problem. "I sense there's some sort of sickness here, and you're just going to have to sweat it out. If you'd like, you can call back tomorrow. We have a couple of guys here, Steve and Paul, and they're much better with computer stuff than I am."

To conclude our research, we asked Ray about our problem with the standard file dialog box. "It's the same thing as the last one," he told us. "There's some sort of sickness here, and you're just going to have to sweat it out. There is a solution, though, and you're just going to have to work at it until you get it."

Conclusions

In terms of technical expertise, we found that a Microsoft technician using Knowledge Base was about as helpful as a Psychic Friends reader using Tarot Cards. All in all, however, the Psychic Friends Network proved to be a much friendlier organization than Microsoft Technical Support. While neither group was actually able to answer any of our technical questions, the Psychic Friends Network was

While neither group was actually able to answer any of our technical questions, the Psychic Friends Network was much faster than Microsoft and much more courteous

	Microsoft Tech Support	Psychic Friends Tech Support
Hours Available	24 hrs/7 days a week	24 hrs/7 days
Fee Structure	\$55 per solution	\$3.99 per minute
Questions Asked	3	3
Correct Answers Given	0	0
Time taken	Approximately 2 hrs	11 minutes
Fee Charged	\$165	\$43.89

much faster than Microsoft and much more courteous. Which organization is more affordable is open to question. If Microsoft does refund all three “solutions” fees, then they will be the far more affordable solution provider, having charged us no money for having given us no assistance. However, if Microsoft does not refund the fees for our call regarding Microsoft Graph, then they will have charged us more than 120% of what the Psychic Friends charged, but without providing the same fast and courteous service that Psychic Friends provided. 🤖

Resources Used by Staff	Microsoft Knowledge Base	TarroCards
Refunds for Un-answered questions	\$110 / \$165	N /A
General Courtesy	Variable	Excellent
Request Credit Card info	Yes	No
Request Date of Birth	No	Yes
Will Call back if they can't solve the problem	Yes	No

Microsoft Tech Support (800) 939-5700
The Psychic Friens Network (900-407-6611

*by Michael Patrick Ellard
and Daniel Albert Wright*

Late-Night Thoughts on Electronic Commerce

by Jonathan Rosenoer

At this point, I don't think there is a serious question about whether the Internet will survive as a integral feature of our civilization. It's here and, just like the telephone, too useful to go away. The Internet also presents an extraordinary fertile source of legal issues deserving attention.

As revealed in the area of intellectual property law, this new technology has opened up questions of law long thought settled. Who would have thought that it is not a fair use to photocopy an article for research purposes? (Certainly not Texaco—they lost this case.) And what about basketball scores? How can they be owned by a league, so that they cannot be reported without permission (or a license fee)? (The NBA, on a roll after winning a suit against Motorola, has now sued America Online for alleged misappropriation of proprietary data under state law because the online service enables its members to receive “real time” game information.)

But intellectual property is small potatoes compared to electronic commerce. Online business aspirations are clearly way ahead of legislation and court decisions. Very few attorneys understand the Internet and have any idea how to advise their clients on how to proceed. Whoever establishes him or herself in this field early is going to do very well.

Security of Messages

There has been a lot of bad press about security and the Internet. Some of it is warranted; the bulk is overblown. Many attorneys worry about using the Internet to exchange email with their clients. They hear that an email message is like an open postcard as it travels the Internet. In a state

A robust encryption scheme needs to address three key concerns: confidentiality, integrity and authentication.

like California where an attorney is obliged to fall on his or her sword rather than disclose a client confidence, this could be a problem. But the postcard analogy is misleading.

A message sent over the Internet is split into small packets, each of which includes information on addressing and sequencing. Individual packets take the fastest and most efficient course to their terminus, where they are met by their fellow packets and reassembled. It is very hard to think about how someone could tap into the Internet itself (the backbone) and choose to read messages sent between a particular lawyer and a particular client. If you could get access to the backbone, how could you filter all that traffic to find a specific message? What if part of the message went a different route? Tapping messages in transit across the Internet is clearly difficult. Perhaps that is why the FBI lobbied so hard to have legislation enacted to provide it with assistance in tapping digital transmissions. (An interesting discussion of the difficulties in locating and monitoring a particular person online is presented in the

book *Takedown*, where the author, Tsutomu Shimomura, describes how he tapped into Netcom to observe the activities of a hacker, Kevin Mitnick.)

A number of people have suggested that safe Internet communication is only possible with sophisticated cryptographic schemes, including public-key encryption and key certification authorities. Encryption is simply a way of taking plain text and encoding it so that its meaning cannot be easily discerned. In a scheme that has lasted through much of history, people who wanted to exchange secret (and encoded) messages had to exchange a key that converts a message to code and back again to plain text. Doing so creates problems of key security and management. What if an enemy intercepts the key (e.g., by reading the mail or torturing the recipient)? How do you securely send one key to hundreds of people?

Encryption Techniques

Recently, these problems were largely resolved by the development of what is known as asymmetric or public-key encryption. By using large, mathematically related numbers, you can generate a personalized set of encryption keys—called a public key and a private key. If a person wants to send a message that only you can read, he can use your public key to encrypt a message that only you can decrypt using your private key. If you want to send a private message to the sender, you use his public key to do so. Well, that's the theory, and there are some details that need to be filled in to frustrate attackers.

A robust encryption scheme needs to address three key concerns: confidentiality, integrity and authentication.

- Confidentiality is addressed by

But while a number of people insist that encryption is a necessity in online business communications, virtually no one uses it

encryption. In key-encryption, the degree of confidentiality is reflected in the size of the keys. A 128-bit key, for example, is much more secure than a 40-bit key.

- Integrity—meaning nothing has been altered since the time the message left the sender—can be ensured by running a simple program and adding a number to the end of the message that reflects the result (referred to as a message digest). When the recipient receives the message, the same program is run and if nothing has changed the same result will be obtained.

- Authentication ensures that the purported sender is, in fact, the person, who sent the message. In a public-key encryption system, a person can use his or her private key to sign a message, as only messages encrypted with a person's private key can be opened with the same person's public key. A new industry is springing up to certify that a particular private key does indeed belong to a specific person, making a digital signature virtually conclusive.

Free public-key encryption software has been available for a number of years and its virtues have been touted widely. PGP (for Pretty Good Privacy) is the most well-known public-key encryption program for personal computers. But while a number of people insist that encryption is a necessity in online business communications, virtually no one uses it. It is my experience that programs like PGP are beyond the grasp of most attorneys. In the two years since I put my public key on the Internet, no one has used it to send me a message. In fact, I know less than half a dozen attorneys who have ever used PGP.

The fact that robust encryption soft-

ware is not widely used may be explained by U.S. export laws that restrict the sale of public-key encryption software overseas. You might think that if there were a larger market, then a lot more money would be spent on making the software easier to use. But this argument rings hollow, particularly given the size of the U.S. computer market and the fact there are a number of U.S. companies focused on encryption.

For some time now, there has existed Internet technology that automatically encrypts messaging between a user and a World Wide Web site. It is called Secure Socket Layer, or SSL for short, and can be seen operating on a number of commercial Web sites. While SSL is a useful tool, it does not do the whole job. For example, it does not secure a company's gateway to the Internet. A wily hacker still may be able to penetrate a company's computer network and snatch bunches of credit card numbers and reams of personal information. (If your firm is using the Internet, you may want to ask about the size and type of locks on your system. Are you using an application or packet filtering gateway? Is your information system staff up to the task, or do you need to send them to a short course or seminar? Maybe they need to brush up by looking at a widely noted book by W. Cheswick and S. Bellovin titled, *Firewalls and Internet Security*.) SSL also does not address the threat to privacy posed by companies that collect all types of information on site visitors by tracking where they go and what they look at, and then compiling the information and exploiting it.

*Is your information system staff up to the task of protecting your company's files from unwanted eyes? Check out the book *Firewalls and Internet Security* by W. Cheswick and S. Bellovin.*

Internal Security Threat

For many businesses, the real security threat is internal. Trade secret theft and embezzlement usually are perpetrated by employees, not third parties. Employees have access to a wide range of valuable information, and the fact it is now all available in digital form allows them easily to take a copy. Insiders with access to a company computer network also have the ability to practice a little "sniffing." This term stems from the fact that messaging on an internal computer network generally travels to all terminals on the network, even

though it may be addressed to only one. In the normal course, only the addressed terminal will receive the message. But a knowledgeable hacker can change his terminal to what is known as "promiscuous" mode and read every message that crosses the network. Some companies use encryption internally to render promiscuous sniffing useless.

*For a detailed look at sniffing and possible solutions, you might look at the *Sniffer FAQ* published by Internet Security Systems, in Atlanta, which can be found at www.iss.net/sec_info/sniff.html.*

Trade secret theft and embezzlement usually are perpetrated by employees, not third parties.

And then there are problems created by transmitting credit card numbers over the Internet. There is a significant difference between sending a message over the Internet and sending a credit card number. While a message probably will be split into many different packets, a credit card number will fit in one packet. After all, it's just a short number. Do we therefore have to worry about sending our credit card numbers over the Internet?

I think not—particularly when compared to the other ways we use our credit cards. When we buy concert tickets by telephone, we disclose the same amount of information to a person we've never seen. If the recipient is dishonest or handles the information carelessly (e.g., throws a copy in the trash), quite a lot of damage can be done before we get the bill. But when we get the bill, we can disavow and dispute the charges. It takes an effort and some time, but in the end we will face little or no liability.

When we buy concert tickets by telephone we disclose the same amount of information (our credit card number) to a person we've never seen.

Credit Cards on the Net

A more significant threat posed by Internet commerce is to the companies that issue credit cards and those that provide merchant accounts, as well as to the merchants themselves. In the case of fraudulent charges, they are the likely candidates to suffer loss. Who actually bears the loss is determined according to the internal rules governing Visa and MasterCard, and similar credit card organizations.

Before delving into the new technologies being developed to encourage electronic commerce over the Internet, attorneys should have at least a rough idea of how credit card transactions operate on the Internet. In essence, these are "card not present" transactions, handled in the same manner as mail order and telephone sales. The essential parties in the simple case are the online purchaser, merchant, and Web site host. The purchaser needs a credit card, issued by an institution sometimes referred to as the issuing bank. The merchant needs a merchant account and terminal ID, obtained from a merchant bank or independent sales organization (collectively, merchant bank). The merchant bank and the Web site host have to be able to process Internet-based transactions. (A surprise to many, credit card rules generally prevent Web site hosts from using their own merchant accounts to process transactions for their merchant clients.)

When the purchaser orders goods, he or she is prompted for a credit card number along with other information (e.g., name, expiration date, and address—

which may be required for verification). A credit verification and authorization request is transmitted via the Internet site to an authorized financial transaction processor, which will advise the merchant whether sufficient credit is available (and reserve the appropriate amount). If the transaction is approved, the cardholder will receive a receipt. The merchant, in accordance with credit card company regulations, cannot submit a payment request for the transaction until the requested goods are shipped. (There are, of course, situations in which a simultaneous authorization and payment request are appropriate.)

Credit card company operating procedures govern the settlement process. In broad terms, the merchant submits the debt to the merchant bank, which initiates a process that results in funds being transferred to the merchant bank. The merchant's account should be credited within 48 to 72 hours of its submission to the merchant bank.

If the cardholder disputes a charge, the merchant will be called upon to produce transaction records (which must be kept for about three years.) The merchant bank and its client may be called upon to return the funds to the issuing bank. Excessive so-called charge-back volume can get very expensive for the merchant, and may result in a default resulting in the termination of its merchant account.

Securing Online Transactions

A number of schemes have been devised to provide "a trusted shopping and payment environment." For example, CyberCash Inc. (www.cybercash.com) of Reston, Va., has designed a system that encrypts a purchaser's charge payment message, authenticates the merchant (to avoid the dreaded "fake store front" set up to collect card numbers), and requests charge approval over a secure, private financial network. Advanced online companies that provide Web site hosting also are able to do this over their own systems.

CyberCash, Inc.

www.cybercash.com

The Secure Electronic Transactions (or SET) specification being developed by Visa International and MasterCard International fortifies online credit card transactions with a complex blend of public and private key encryption, combined

with the use of certification authorities. In the SET process, you know that the merchant is who he says he is; the purchaser is who he says he is; the merchant/Web site that is the object of the transaction is authentic; the purchaser's credit card number is encrypted and not disclosed to the merchant or the Web site host; and much more. The SET specification is a very long document and quite complicated, but the effort to promote SET as a standard should lower ongoing transaction costs for companies that use the technology.

Some people say SET is needed because a genius college dropout will figure out how to capture thousands of credit card numbers and steal millions of dollars. On the other hand, a competitor and critic of SET warns that "the bottom line on cryptography is that it isn't magic, it isn't perfect, and it will always be breakable." Much of this discussion lacks any reference to a limiting factor that would allow a reasonable evaluation of the electronic environment for commerce.

Little proportionality finds its way into the discussion: There is much talk about risk, but hardly any discussion about probability of occurrence. (Will the failure of an encryption scheme always result in a catastrophic cost of failure? So far, the answer has been a healthy "No.") There also has been virtually no discussion of the problems experienced in comparable endeavors that are subject to fraud and embezzlement. In the absence of clear, informed, and balanced discussion of the problems faced in electronic commerce, the commencement of a healthy electronic marketplace has been delayed at a time when it is sorely needed to support the Internet's development and expansion.

There is much talk about risk, but hardly any discussion about probability of occurrence.

State taxation of online services is a growing focus of attention and an area of law that will inevitably cause tremendous controversy and legislative challenges

Some companies are rushing to market with their own mechanisms for electronic commerce. For example, First Virtual Holdings Inc. (www.fv.com), based in San Diego, has developed a payment system that does not use encryption—relying instead on email call-backs. To use this system, however, both buyers and sellers need to establish accounts with First Virtual. There are also systems based on electronic money tokens, some of which are designed not to identify the person with whom they originated—providing a measure of privacy through anonymity, but posing all the problems of untraceable fund transfers.

Beyond Online Shopping

The holy grail for many entrepreneurs appears to be development of micropayment systems, allowing visitors to Internet sites to be charged a fraction of a cent for visiting or viewing information. Internet advertising already seems to have captured the valuable part of this market, paying according to the number of people who visit (or “hit”) a popular site at a rate far greater than one cent a hit. (About \$26 million was apparently spent on Web advertising in the first quarter of 1996.)

Electronic commerce is clearly not only about online shopping. It includes a large array of other activities. Business-to-business transactions are a big enterprise, and electronic communication is said to be capable of slashing the cost of processing a purchase order from \$150 to as little as \$25.

A number of companies are focusing on electronic bill presentment, which promises to eliminate paper handling, checks and postage costs; (\$2.4 billion may have been spent in 1995 on postage for bills and bank statements). Electronic banking also is on the horizon, bringing a host of issues about the application and interpretation of banking rules and regulations. How these rules and regulations might apply to companies offering innovative electronic payment systems probably will develop as a unique attorney practice area in and of itself. And let's not forget electronic gaming, sweepstakes, and lotteries, as well as a host of other highly regulated activities (e.g., insurance) that are making their way onto the Internet.

There is great interest in using the Web for trading securities. At the end of 1995, the Securities and Exchange Commission issued its first interpretative release on use of electronic media by mutual funds and other issuers. In March 1996, Spring Street Brewing Co. (plaza.interport.net/witbeer/), of New York, opened its Wit-Trade system on the Internet, which it designed to provide a market for the company's common stock. Shortly afterward, trading was suspended in response to an SEC request and inquiry. Accepting SEC suggested modifications for investor protection, Spring Street's founder then announced plans to build Wit Capital Corp. (www.witcap.com), touted as “the world's first investment bank and brokerage firm dedicated to arranging the public offering of securities through the World Wide Web.” Needless to say, securities offerings are subject to both federal and state regulation. Failure to comply with applicable requirements may be a criminal offense.

Fear vs. Opportunity

State taxation of online services is a growing focus of attention and an area of law that will inevitably cause tremendous controversy and legislative challenges. Until now, most online providers and subscribers have not confronted the issue. But there appears to be no federal law or legal doctrine, for example, that would prevent the imposition of an equitable and intelligently implemented state tax regime applied to online systems and Internet sites.

Because electronic commerce involves transactions that in many cases involve

multiple parties living in different states, and perhaps foreign countries, a host of jurisdictional and procedural issues are implicated. These include questions of jurisdiction, venue and choice of law. Problems associated with jurisdictional reach of foreign states were recently highlighted in the Tennessee prosecution and conviction of a California couple, Robert and Carleen Thomas, who ran an adult dial-up computer bulletin board service.

The Thomas case as well as tales of hackers attacking computer networks have made for great press copy, and they have captured the attention of movie studios and a large segment of the public. Much of this is unfortunate, since it has obscured the real news—a revolution in the way business will be transacted. Discussion of Internet-related security issues also has been clouded by reports of unique and exceptional cases, with the result that many people have shied away from the new technology. In light of the rapid development of electronic commerce and its implications across many different areas of practice, lawyers may discover that they are at a competitive disadvantage—unable to fill their clients' needs—if they do not have an understanding of the technologies and opportunities involved. 

Jonathan R.osenoer (cyberlaw@cyberlaw.com) is vice president of Internet Services for North Communications (www.infonorth.com). A California lawyer, Mr. Rosenoer publishes a pro bono educational service on computer law for computer users, named CyberLaw (www.cyberlaw.com). His book on the law of the Internet will be published later this year by Springer-Verlag.

Reprinted with the permission of Law technology Product News. Copyright © 1996, The New York Law Publishing Company. All Rights Reserved.

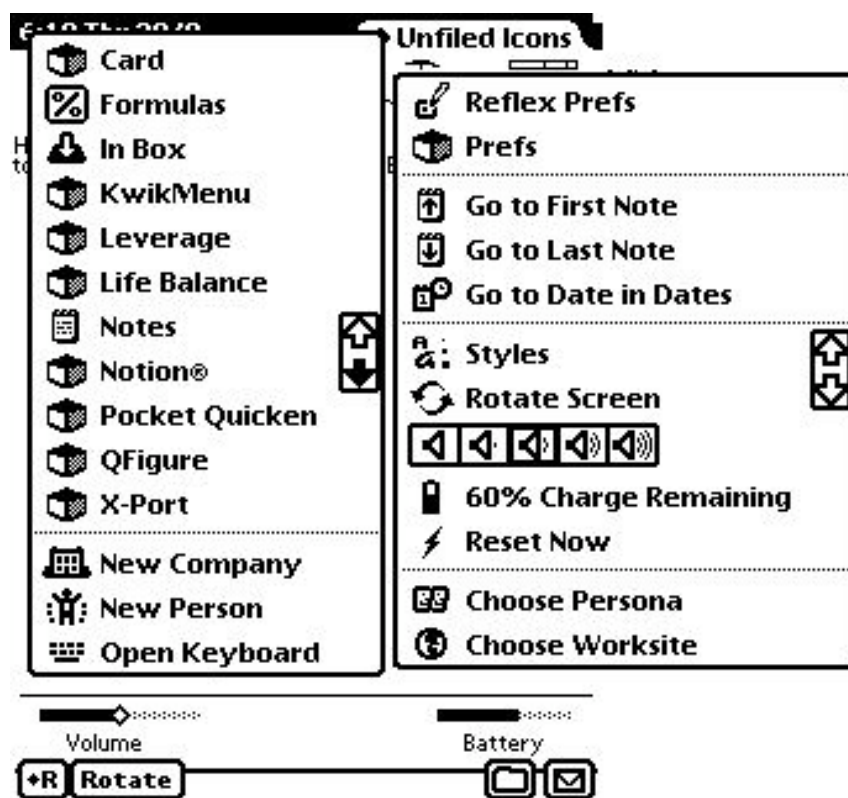
Mobile Products



Now Utilities for the Newton

KwikMenu and Reflex

by Don J. Modesto



Reflex

Pros: Reduces navigation and wait time; opens keyboards anywhere.

Cons: Can't make menu text smaller or larger.

Ideal users: All Newton owners

KwikMenu

Pros: Consolidates and enhances functions and text entry.

Cons: Can't make menu text smaller or larger.

Ideal users: All Newton owners

Wasted Motion

The Newton has marvelous gee-whiz! value but can be tedious. Both KwikMenu and Reflex enhance basic Newt features, increasing your productivity with and enjoyment of the Newt.

KwikMenu and Reflex enhance basic Newt features, increasing your productivity.

As an example of clunky Newt procedures, you must often leave the application you are in for the Extras drawer (where applications are), dig around for some needed function, and return to complete your work in the original app. Working in

Notes, e.g., I want to format text as bold. I have to—

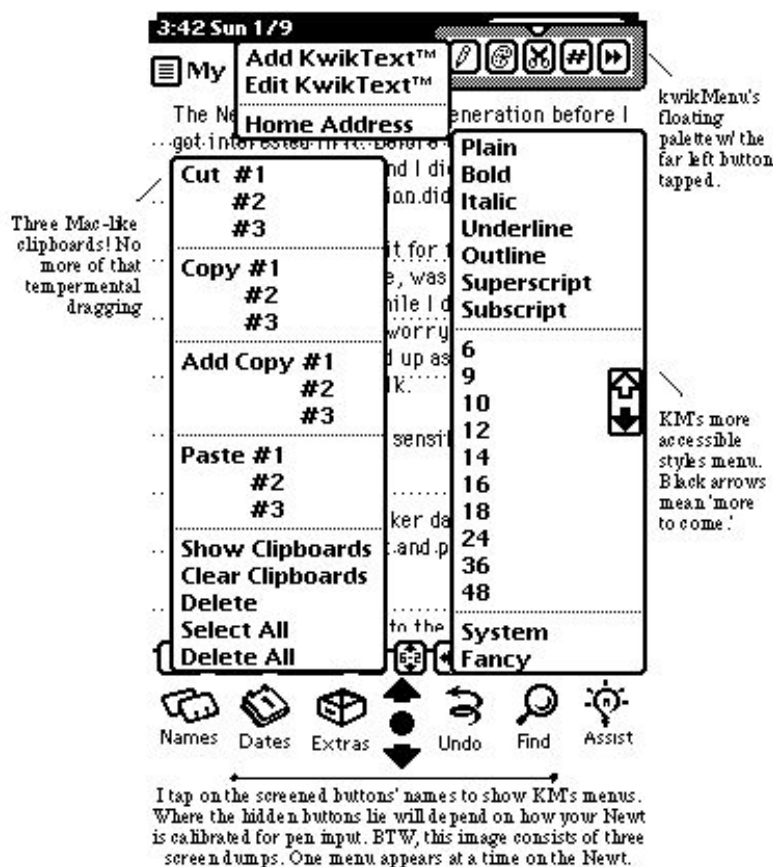
1. tap Extras
2. wait
3. search out Styles from among the other 30 icons
4. (possibly search in a different folder to do so)
5. open it
6. return to Notes
7. select the text
8. do the formatting.

With the Newt's Styles app installed in a Reflex menu, on the other hand, or using KwikMenu's own format menu, I—

1. select my text
2. tap for the menu to come up
3. do the formatting.

No contest. Moreover, there is similar economy of motion with connections, scheduling, and text input.

KwikMenu and Reflex are must-haves. Even if you don't have both, you owe it to yourself to have one. They both provide multiple pop-up menus that streamline Newton actions. In some ways their functionality overlaps. Both can automatically



enter the date, set up new To Do items, and restart the Newt. I depend on both and tend to think of Reflex as saving me from tedious navigation around the Newt. I go to KwikMenu for system enhancements such as the three clipboards.

Sine Kwik Non

KwikMenu's five menus are pre-configured with such goodies as KwikText, a Newt version of Word 5's glossary. Copy a letter salutation to it and the next time you send a letter, select it from KwikText rather than writing it. Some items you might include, though, may already appear in another menu which provides information from your personal Names cards, e.g., "home #," or "address." The formatting menu reappears with each tap, facilitating multiple changes to text without multiple trips to the button. Yet another menu provides several connect options such as via serial port, via modem, etc.

KwikMenu offers three points of access. There is a GestureLaunch Lite Script option. You can call up a palette of buttons or configure the menus to appear with taps below Apple's silk-screened buttons. Without too much effort, you can remember where the invisible buttons lie and leave

the Newt's scarce screen space uncluttered. (At first, I could not get this option to work. Following LandWare support's recommendation, I re-calibrated the screen with the Newt's Setup package and now it works perfectly.)

Reflects on Apple

For years, reviewers hailed Now Menus. Apple finally included similar options (Apple Menu Options and the extension manager) in its MacOS. Now, the Newt can be pretty spastic. With such experience under their belt, you have to wonder why Apple would send the Newt into the cruel world without good Reflexes to render it graceful again. It's Reflex or plodding. Reflex installs two tiny "notches" in the upper left and right corners of the screen and a floating button. Tap any of these and a menu appears. The Prefs file allows for extensive customization of the menus. You can turn them off, clear them of any or all items, and install applications and 'actions' (which consolidate several actions into one or two taps.) Reflex ships with 41 actions but others, such as Aloha Mail for AOL, are also available on C & G's Web site. Moreover, any Newt programmer can develop more in order to enhance their

product as Reflex has a public API—Application Programming Interface—which means something like published protocols that developers can use in programming for the application as they do for QuickKeys shortcuts and Photoshop plug-ins.

With frequently used apps in the left pull-down menu and Newton books (read-only text files—I make them from downloaded text) in the right, I seldom see the Extras drawer anymore (see illustration). I use the floating menu for system actions such as rotating the screen.

Reflex also subsumes the functionality of some Newt shareware. I++ (see Sidebar) also allows configuration of a menu. But it offers only one menu and you have to clean it up manually. That is, if you erase an installed application, I++'s menu won't know it until you tell it. Reflex can take care of itself. It also lets you jump to the first or last notes or a specific date in the Notes app, although it doesn't offer a previous/next note feature as does the shareware NoteHopper.

Final Words

Before installing Reflex and KwikMenu, I writhed at the thought of plodding along the Newt way. These two utilities have made using the Newt immeasurably more enjoyable and I recommend both highly.

These two utilities have made using the Newt immeasurably more enjoyable. 🦾

Reflex

Casady and Greene
Phone: (408) 484-9228
Fax: (408) 484-9218
AOL Keyword: Casady
Email: tech@casadyg.com
W3: www.casadyg.com
Price: \$39.95
KwikMenus
LandWare, Inc.
Phone: (201) 347-0031
Fax: (201) 347-0340
AOL: LANDWARE
Email: info@landware.com
W3: www.LANDWARE.com
Price: \$39.95

Don Modesto can be reached at modesto@gol.com or modesto%ringo@fca.cyber.ad.jp. He lives in Tokyo teaching English as a Foreign language at secondary and university levels..

Khyberspace

by Don J. Modesto

The Khyber Keyboard is one of those products you immediately like for its ingenuity in playing several roles: screen cover, Newton stand, and, of course, keyboard.

A little smaller than the Newt itself, the Khyber plugs into the serial port and uses the Newt's cover-locking mechanism to clip on just under the screen. Wrapping around the back of the Newt is an elastic strap attached to a pair of legs. A plastic tab slides into the space between the Newt and its screen cover, securing the legs at the top. They swing out to put the Newt at an ideal 40-degree angle on a surface and fold away for hand-held use. A short cable connecting to the serial port curls too tightly for its own health; after but two or three hours' use and attaching/detaching it a few times, mine has pulled out of the casing to expose wires.

Khyberspace

The Khyber solution to Newton keyboard input is multifunctional, sleeker, and more elegant than the Apple alternative, which has to be toted about in two separate units. Naturally given the dimensions of the Khyber, touch-typing would be impractical even if all your fingers were pinkies: it's a definite hunt-and-peck operation. The keyboard layout is a bit disconcerting at



Figure 2. Here the keyboard is but halfway rotated. Turn it right to protect the screen, left to use. The legs in the back fold under the Newt.



Figure 1. Though it about doubles the Newt's thickness, the Khyber keyboard combines three functions into one unit and makes text entry more efficient.

first. The delete key is at bottom right rather than at the top right. Quotes are on the other side of the board from where you expect them, too. It took me just moments to adapt to these differences, though.

The rubber keys lack the satisfying click of Apple's Newton keyboard—twice the size of the Khyber—for aural feedback, and it takes more than a casual swipe of your finger to rid keys of dust. More problematic is the impact it takes to register a keystroke. You will find many words in your first entries made with the Khyber to be missing letters and punctuation. While it makes for tense typing, this too is largely overcome within the first few minutes of serious usage (as I am discovering inputting this review).

The Khyber(Don't) Pass

I find myself liking the Khyber Keyboard more than I thought I would when I first saw that I couldn't touch-type on it. I get stuff in faster than I can write it (and have it recognized) with fewer mistakes and far less hassle in the correction of mistakes I do make. I don't know your tolerance for one-handed typing on a QWERTY layout, but if you eschew pen input, the Khyber is worth a serious try. 

Don Modesto



Figure 3. The Khyber Keyboard sans Newton.

*The Khyber Keyboard
Khyber Technologies Corporation
150 N. Miller Road, Bldg. 350
Fairlawn, OH 44333-3713
Phone: (330) 869-5555
Fax: (330) 869-9255
Email: khyber@ibm.net
URL: <http://www.industry.net/khyber>
Khyber \$119 USA list price/¥14,800
Tokyo street price*

Copyright Don J. Modesto, 1997. All rights reserved.

The Portable NC

by Robert K. Morgan

All of the talk centering around the NC Revolution is based around a "static model" that assumes they will be used in either business network computing or as an Internet/Interactive terminal in the home. Much in the same way PCs were considered before the PowerBook hit the market. With the exception of Recon for Investors (RFI), no one has talked about Portable NCs. Granted, a "primitive" version exists and it is the Apple (Newton) Message Pad 120.

Just as IBM introduced the NC concept (dumb terminals) before all of the factors were in place to ensure its success, Apple made the same "mistake" with its "Wireless Portable NC." Yet, both are the only two companies who have undergone the R&D/"Trial & Error" process and have learned their NC "mistakes."

But, the question is: "What is the Portable NC?" To answer that question, RFI is going to use the "familiar" to describe the "unknown."

Basically, a Portable NC is a wireless modem with a screen and a keyboard. It could be as small as a Newton Message Pad, but ergonomics dictates that it will most likely be the size of a notebook computer, but much lighter. The "computing power" would be provided by the network server that would provide the "applets" to perform whatever tasks were needed at that time.

The Operating System (OS) that operates the Portable NC would be a "minimal OS" whose main function would be to provide high speed communications (such as the Newton OS) between the network server and the NC. The "connection" would be made either by wireless modems or phone lines when available. The phone lines would include: analog, ISDN, etc.

The Portable NC could have limited storage capabilities via Flash ROM and other features as needed or requested. Such features would include: AV jacks for external audio/video, EtherNet ports, SCSI

Basically, a Portable NC is a wireless modem with a screen and a keyboard.....

The "computing power" would be provided by the network server that would provide the "applets" to perform whatever tasks were needed at that time

buses and even infrared transceivers. There are more, but these are a representative sample.

Because the "network" would be providing the computing power and "software," the display would be grayscale until the network took over and made it color. And because the network stores the software and data; a hard disk and large amounts of RAM would not be required to run the programs, etc. And if you needed an "applet" of Photoshop, you would not need to have it installed on your drive, the network would have it available for your use.

Since you are running what is basically a "glorified modem," your power requirements would be much less and it would run on one of the notebook batteries for quite some time before needing replacement or recharging. In fact, you could even use "gar-

den variety" AA batteries to run the "box." Such a feature would make it much easier for average people to always have a "fresh supply." The availability of AC power would be but a jack and transformer away. All at a lower cost than notebook computers.

AV jacks for external sources would be another option, as well as Ethernet and SCSI buses. Again, all of the technology is "off-the-shelf" for making the Portable NC. And, it would come in at a lower cost than notebooks. How so? : minimal RAM and ROM, no hard drive, no new technology, lower power requirements, ad nauseam. Current manufacturers of notebook computers could switch over to producing Portable NCs, even if they used their existing cases. Line retooling would be minimal.

As wireless modem technology (i.e. PCS and satellite) advances, so will the speeds of the Portable NCs. Yet, even these initial "speed hurdles" will be caused by the network support capabilities and speed. "Degradation" will mostly be caused by the network load and performance.

As wireless modem technology advances, so will the speeds of the Portable NCs.

Now, are you "seeing" why the online services' and ISPs' business models are woefully outdated and cannot readily adapt to the NC Revolution? Especially once the Portable NCs are inevitably launched? Their networks and business models will have to be redesigned, overhauled, and retrofitted. In fact, they should "scrap the whole shebang" because the NC Revolution will trigger a quantum leap in the Internet and Internet services.

Also, RAM prices will "plummet" because as the NCs become more popular, there will be an "oversupply of capacity and inventory." NCs won't use SIMMS or DIMMS.

So, in effect, a Portable Wireless NC is basically a "full-sized version" of the Apple (Newton) Message Pad 120, but with far greater functionality, etc., than the current

...Java is still basically a programming language that needs an Operating System to run on. Sun and Oracle realized this fact of the NC/Information Appliance Revolution, which drove Sun's ill-fated attempt at a "take under" of Apple and subsequent Sun/Apple alliance...

offering. Using the Message Pad 120 as an "example" of a Portable NC isn't "fair," as the Message Pad 120 is limited by "network support".

The Bottom Line: It's just a glorified modem with a display and a keyboard. And, that "desktop NC" could also be enabled to be a Portable NC.

Simplistic? Yes!

Addendum:

If you take a look at RFI's description of a "Portable NC," you will see that it closely resembles what was subsequently announced as the eMate 300, and later as the eMate 1000 for business use. It doesn't take a "rocket scientist" to realize that RFI recognized the latent potential that the NewtonOS and platform had for being the "premiere" platform for Portable NCs/Information Appliances.

There were, and are, a lot of Dog Robbers and Recent Converts who promulgated Java as "The Platform," and later WinCE, but they failed to recognize one basic fact. Java is still basically a programming language that needs an Operating System to run on. Sun and Oracle realized

this fact of the NC/Information Appliance Revolution, which drove Sun's ill-fated attempt at a "take under" of Apple and subsequent Sun/Apple alliance. And, it is what drives Larry Ellison's (of Oracle) apparent "obsession" with Apple.

Java is still basically a programming language that needs an Operating System to run on.

WinCE can only be a less than optimal/sufficient shadow of what the NewtonOS already is. This isn't meant as a slight to the legions of WinWorld users out there, but RFI is going to use a comparison we used in 1995 when comparing the MacOS to WinNT on PPCP: "You can drop a Porsche engine into a Volkswagen and make it work but it won't be long afore it blows up. And it certainly won't beat a Porsche in a race." The same goes for NewtonOS vs. WinCE.

And, with all this "alleged boosterism" of NewtonOS for NC/Information Appliances, RFI is not "slamming" IBM and its Network Stations. Far from it. It was with a healthy degree of bemusement that RFI received the reports of the "Apple Network Remotes" pilot project in Singapore where those "Apple Network Remotes" (possibly "wireless") were running off of IBM servers. If anything "smelled" like the "fruits" of the Apple/Sun alliance with cooperation from IBM, RFI doesn't know what does.

Furthermore, the "rumors" of those "Apple Network Remotes" are also strengthened from the recent reports of the "EBM" alliance recently announced for component/applet/part standard architecture coupled with Apple's apparent "endorsement" of Java/JavaDoc and WebObjects as its future instead of OpenDoc. And RFI was a "big fan" of the OpenDoc architecture. But if we knew then what we know now, RFI would have accurately forecast the marriage of Apple/NeXT as well as this latest development with OpenDoc. Instead of "The OpenDoc Revolution" Special Reports, RFI would have written "The JavaDoc/WebObjects Revolution Special Reports."

Bottom Line

With certain refinements, everything RFI reported on "Portable & Wireless NCs" has become true and the rest will more than likely follow. At the time, RFI was "seeing through a glass darkly" and forecasting as best as the available intelligence and "recon" would allow, but we've been more accurate than those who were claiming to be experts at the time, as well as the current

"Gurus Du Jour" who are out on the "Seminar Circuit." "Portable NCs" have been here for a while, and the offerings are about to be broadened with the functions/features that RFI wrote about so long ago.

Conclusion

Recon for Investors knows that there are any number of "Dog Robbers" and "Recent Converts" who will purport, and charge people to hear their erroneous prognostications, to "know" what the NC/Information Appliance Revolution holds, but consider their current statements in light of what RFI "compiled" in the fall of 1995 after covering this "thread" since we bothered to listen and pay attention to the "new" IBM Chairman Louis Gerstner in early 1993. "Whose Report Shall You Believe?" A "Dog Robber" representing others work as their own? A "Recent Convert" regurgitating "Analysis & Forecasting by Press Release and Media Report"? Or the people who dared to "climb way out on a limb" in 1993 and compiled their analysis and forecasting in the fall of 1995? That's a question only you can answer for yourself.

For what it's worth, RFI really tried to "educate" the "Dog Robbers" and "Recent Converts" before they dug the hole they were in deeper, but we gave up after their "egos" got in the way. Seems they think that being "backed" by "salon names" and the ever present "grace of 'The Windshield Wiper Effect'" shields them from having to "explain" their being wrong. And, RFI apologizes for using the "Inside Baseball" terms of "Dog Robbers" and "Recent Converts." Elaboration would take too long to justify the space. 

Robert K. Morgan

This article was taken off of Apple Recon's Web site. For more commentaries and analyses on Apple Computer, check out Apple Recon's site at http://www.geocities.com/WallStreet/7744/apple_recon.html

Copyright © 1997. Recon for Investors. All Rights Reserved.

The Hottest Potential Portable NC Play is WHO?

by Robert K. Morgan

Which company already has the nascent version of the Portable NC in production and on the market? One that hasn't sold as well as initially forecast, but is potentially positioned to be the "first and best out of the gate" with a Portable NC that offers the features and functionality that the market will desire? None other than the Tech Sector Company that analysts "love to hate": Apple Computer.

Recon for Investors (RFI) is "crazy" you say? Let's see how "crazy" we are. Who has the RISC chip and OS that will run a NC? Who has the hardware currently available to run both Desktop and Portable NCs? Who has a CHRP platform that will enable

the near term. Even if they use the PowerBook 190 cases and screens for the "box" while filling it with NC architecture.

Yet, Apple probably won't "make the same mistake twice" and will "hang fire" on a launch until there are networks capable of not only supporting the NC, but the load as well. And that means a..... Sorry, we've hit that confidentiality wall again.

Apple probably won't "make the same mistake twice" and will "hang fire" on a launch until there are networks capable of not only supporting the NC, but the load as well.

However, Apple's capacity and ability to quickly introduce these Portable NCs very quickly make it one of the hottest potential Portable NC plays out there, and one that

detail; and RFI suspects that it is also one of the reasons Apple wooed him back into the fold.

While the above items are all "interpolation and analysis" on our part, the premises are sound and the conclusions result in a logical progression of the NC Revolution.

Last item. Apple can make those Portable NCs "desktop models" as well. How so? All one needs to do is make an accommodation for AC power. And the "desktop models" can be made "portable" by enabling them to be battery powered. Ergo, right from the start you get a "twofer." Still consider Recon for Investors "crazy"?

This article was taken off of Apple Recon's Web site. For more commentaries and

Apple probably won't "make the same mistake twice" and will "hang fire" on a launch until there are networks capable of not only supporting the NC but the load as well.

"NC Networks" and Parallel Networks to run "cross platform applets" without compatibility problems? Who has already undergone the "trial and error process" for Portable NCs? Who is allying itself (and vice versa) with the NC players and a whole host of others? Who is in partnership with companies that will be part and parcel of both the NC and Portable NC Revolutions? Like IBM and Motorola? Are we smelling money here yet? Has lightning struck?

The answer to all of the above questions is Apple Computer. Simply because Apple Computer has the wherewithal to be the first out with a Portable NC makes it, potentially, the hottest Portable NC Play in

has been overlooked by the "Dog Robbers" and "Recent Converts." Which only goes to show that they have no understanding of the NC and Portable NC Revolution.

By the way, RFI has to give credit where credit is due. We initially "stumbled across" the Wireless Portable NC "thread" in a column written by Guy Kawasaki, who has since returned to the Apple fold as a "Apple Fellow." Ostensibly to promote "better relations with developers." And if you believe that....

Well, Guy Kawasaki "exposed the thread" and RFI began pulling, and kept on pulling, until the "story" unraveled. It was Guy Kawasaki who described the nascent idea of the Wireless Portable NC, almost to the last

analyses on Apple Computer, check out Apple Recon's site at http://www.geocities.com/WallStreet/7744/apple_recon.html 

Robert K. Morgan

This article was taken off of Apple Recon's Web site. For more commentaries and analyses on Apple Computer, check out Apple Recon's site at http://www.geocities.com/WallStreet/7744/apple_recon.html

Copyright © 1997. Recon for Investors. All Rights Reserved.

The Business eMate

by Robert K. Morgan

Recon for Investors (RFI) had previously reported that there was a keen interest in the business and IS communities for a "Business eMate" because the majority of business users don't need a laptop PC for their everyday tasks. Instead, they need something more along the lines of an Information Appliance and Communication Station.

We'll discuss the nascent eMate 1000, that is most likely going to be rolled into the PowerBook Division, along with the Newton MessagePad 2000.

What is the eMate 1000?

Basically, it is meant as an alternative to laptop PCs for people who don't really need a laptop PC for their everyday business tasks, as well as being easier to maintain. Furthermore, it is also capable of being connected to a desktop PC or network for disseminating data between the desktop and/or network. It also allows connection to the Internet as well as cross-platform (WinTel) connectivity.

In other words, the eMate 1000 is the Portable and Wireless NC. And it is also easier for network managers and administrators to support. If push comes to shove, they can be easily replaced rather than repaired. It's a lot different than having to deal with all of the administrative headaches that PCs and laptops (especially WinTel platform boxes) give them. And adding them to the network is as easy as plugging it in and logging on. No muss, no fuss. Much like adding a MacOS desktop/portable to a LAN.

The eMate 1000 will also be able to work off wireless modems, much like laptops, and it's a lot more rugged than the current crop of laptops. The eMate was designed to survive the rugged treatment that students and others in the educational field would give them. They were designed for rough treatment, including being dropped from over 3 feet, as well as being

out in the field. That the design of the case will have a business look rather than the "Goosebumps Vomit Green / Artist Formerly Known As Prince Purple" color schemes.

In fact, RFI might be blamed for generating a lot of the business sector's interest in the eMate boxes as RFI has been discussing the appeal of the eMate to numerous individuals and organizations, as well as reporting the fact that business people were "conspiring" to get their hands on eMates from the special educational deals that would be offered to those with children in school.

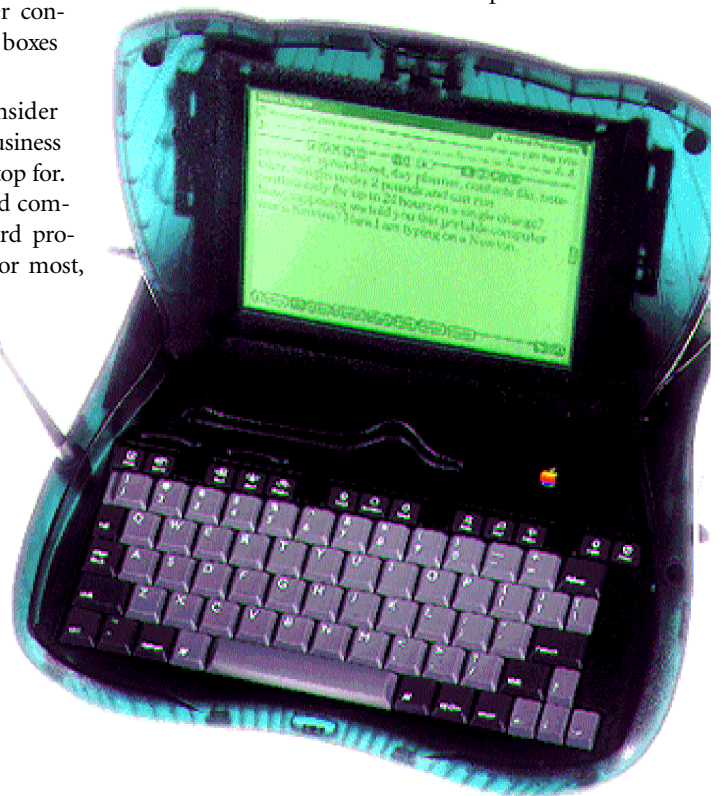
But, What Makes eMates So Desirable For Businesses?

- There's the cost factor, especially if you include maintenance costs. The eMate 1000 will cost less than \$1,000 and have maintenance costs comparable to that of a MacOS desktop. In other words, a heck of a lot less than WinTel boxes, while providing ease of use and inter connectivity with WinTel boxes and networks.
- Performance. Consider what the average business user utilizes their laptop for. Most of it is "glorified communications and word processing functions." For most, there's no "heavy lifting" involved. And the eMate fills that bill nicely, even if you only consider what the educational model, the eMate 300, offers.
- Simplicity. With the integrated software, as well as connectiv-

ity to the Internet, networks, desktops, etc. there's a compelling reason for the demand. Plug N Play, not Plug N Pray. And with the Win2Go software, file/data sharing is as simple as transferring the data. And that enables business people to focus on what they need to do. And sending/receiving data is as easy as it is on the Mac.

- Ruggedness. Drop the eMate 1000, as happens and it will most likely turn on and work. No, "Uh Oh." Granted, today's laptops are more rugged these days, but the eMate is even more so. Remember, even staid business people have "accidents" with their laptops, and the eMates were designed to withstand the rough treatment that a first grader could give it and survive. Think about letting a first grader "borrow" your laptop. Don't think so.

- Theft. What's one of the greatest worries that laptop owners have when their cherished notebook computer is exposed to the



mean and nasty world? Theft and accident. PC Thieves love targeting laptops as they are easy to steal and sell—either complete or in pieces. However, thieves won't be so attracted to the eMates as there are no high-priced PowerPC or Pentium chips or other components inside. They'll learn to identify them soon enough. If it isn't "profitable" for them to steal eMates, then they will not expose themselves to the risk. The most valuable item on the eMate will be the information and data and can be automatically backed up if connected to a network or via modem.

That should be enough for now. And while the eMate isn't designed to replace laptops, it is an alternative to them, and they have their definite attractions to businesses and corporations. And Apple seems to realize this as well from the response they have received to the eMate 300 and Newton MessagePad 2000.

Bottom Line

When was the last time the business community came to a computer company and overwhelmingly requested that a product specifically developed and targeted to the education market be ported to the business market? Granted, Apple has a history of "testing products" in the education market before releasing them to the general market, but this movement occurred even before the eMate 300 was released to the educational market. Ergo, the eMate 1000 (BusinessMate 1000 is a better name) apparently fulfills a niche that currently existing products do not fill or address. 

Robert K. Morgan

This article was taken off of Apple Recon's Web site. For more commentaries and analyses on Apple Computer, check out Apple Recon's site at http://www.geocities.com/WallStreet/7744/apple_recon.html

Copyright © 1997. Recon for Investors. All Rights Reserved.

BMUG Resources

COMPUTERS

DESKTOP



Power Mac 5400/180

\$2000

Presently available only to the education market, this PowerMac is what an all-in-one, clutter-free, Power Macintosh should be. It sports a PowerPC 603e processor running at 180 MHz on an Alchamy based motherboard, and a wealth of excellent features including 16 Megs of RAM, a 1.6 Gig hard disk, and an 8x CD-ROM drive. The built-in monitor is a 15-inch, .28 dot pitch color display offering 16-bit color. Expansion options are available with a PCI slot. Many audio enhancements including a pair of speakers and a microphone are incorporated into the unit. Be sure to add 256K of cache memory for optimum performance.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://productinfo.apple.com/productinfo/datasheets/dt/pm5400-180-lieed.html>



Performa 6400/200

\$1800 to \$2300

The best of the pared-down Performa line, the 6400/200 is an excellent choice for home or small business use, especially at the recently reduced price. Its 200 MHz 603e chip is fast with onboard 256K level-2 cache. A large 2.4 Gb drive, 8x CD-ROM and a Global Village Platinum 28.8-Kbps modem make this one well-equipped machine. But there's more: a great speaker system with a subwoofer for better bass, a wealth of software including Megaphone for voice-mail, and some room to expand although it only accepts the short 7" PCI expansion cards. Optional extras include Apple's TV/FM Radio tuner; video capture and output and PC Compatibility cards, which are a breeze to install. There is even an impressive multimedia option with the Avid card and software. This tower model looks good and is a good value, despite less than blazing graphics speed and unexpandable VRAM limiting color and monitor options. Although the 180MHz version looks to be a better bargain, performance is significantly worse, and "necessary" upgrades bring it above the price of the 6400/200.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://performa.apple.com/performa/datasheets/performa6400-200.html>

PERFORMANCE ENHANCERS



TechWorks

At last! RAM is cheap!! With all the new memory intensive applications out there, an average Mac user needs 16 Megs or more of RAM. Buy it. TechWorks has memory for all current Apple products, plus a long line of specialty and 72-pin SIMMs and DIMMs. You get clear instructions on how to install your RAM, along with tools for opening your Mac or PowerBook—not usually included when you order from other companies. A lifetime warranty, 30-day money-back guarantee, and toll-free support all make TechWorks a Mac peripherals company to emulate. The people on the phone taking orders are among the nicest people that BMUG has dealt with. Be sure to tell them that you're a BMUG member, and ask for the BMUG discount. For older machines, consider checking Planet BMUG for used SIMMs at bargain prices.

Technology Woks, 4030 West Braker Lane #350, Austin, TX, 78759, 512-794-8533, 800-688-7466.
<http://www.techworks.com>



Power Macintosh Level-2 Cache Card

An absolute must for every Power Mac. Many brands of cache card will work, and provide about a 15 to 20% speed boost depending on the application, but some models are picky and incompatibilities exist, so check compatibility before you buy. The faster your CPU the more cache you should buy. 256K is the minimum with up to 1MB on the latest screamers.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://performa.apple.com/performa/datasheets/performa6400-200.html>



AsantéFast 10/100 (PCI) AsantéFast 10/100 (NuBus)

**\$150
\$270**

As options packages for PowerPC's keep changing, Ethernet capability is no longer standard equipment. Not to worry. Inexpensive and fast alternatives exist from Asanté. It's Fast Ethernet cards provide good speed (approximately 2x the speed of a 10BASE-T set up) at a good price. As a bonus, the PCI version comes bundled with Choice Product Net Doubler which sells for \$65 all by itself. If you already have Ethernet, the speed boost vs. cost of the upgrade to Fast Ethernet needs to be considered.

Asanté Technologies, 821 Fox Lane, San Jose, CA, 95131, 408-435-8388, 800-662-9686.
<http://www.asante.com>



ATI Xclaim GA PCI Video-Display Card

\$250

For many PowerPC owners, one significant bottleneck inhibits performance: their on-board video. If you need faster redraw and rendition, consider a video card. There are many out there with more to come. A good choice is the Xclaim GA card. The 4-Meg version is relatively inexpensive, yet it doubles the speed of many functions.

ATI Technologies, , , , 905-882-2600, .
<http://www.atitech.com>

PORTABLE



PowerBook Duo 2300c

\$1500 to 1900

The newest (and only) Duo from Apple features the 603e Power PC processor chip running at 100 MHz. It is still a lightweight at 4.8 pounds, and still sports a 9.5 inch active-matrix color display, and now has a trackpad instead of a trackball. Otherwise it's the same as the now-discontinued 280c. It comes with either 8 Megs of memory and a 750 Meg hard drive, or with 20 Megs of memory and a whopping 1 GB hard drive and a less-than-impressive Apple Express Modem II. If a Duo fits your needs, this is an excellent choice. If a regular PowerBook is what you want, consider waiting for the next series due out later this year.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://product.info.apple.com/productinfo/datasheets/pt/duo2300.c-100.html>



PowerBook 1400cs PowerBook 1400c

**\$2500 to \$2900
\$3500 to \$4000**

Frustrated? The last year has seen a glut of problems for Mac users who crave a portable. The 5300 series was slow, buggy and lacked some basic features. The next generation of PowerBooks is still off in future and clones have stayed on the desktop for now. What's a laptop lover to do? Check out the 1400 series. It's not just an update of the ill-fated 5300. It is a new design that boasts a large 800x600 pixel 11.3-inch diagonal color screen, either passive matrix (the "cs" models) or active matrix (the "c" models). The passive matrix screen is improved making it a real contender. The big news is the 6x CD-ROM standard on all but the cheapest model. Battery life is decent though not state of the art. All but the base model come with 16 MG of RAM. Hard disks are 1 GB on the "c" models and 750MB on the "cs" models. Only the top of the line includes the performance boosting Level-2 cache. It is not faster than the old PowerBooks, but it seems solid. And at last the insides are much more user friendly.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://product.info.apple.com/productinfo/datasheets/pt/pb1400.html>

POWERBOOK ACCESSORIES



Lind Electronic Design, Inc.

Price varies

In addition to a range of power adapters, batteries (from the regular internal ones to several external models) and battery chargers, they also make a device that conditions a battery, either externally or while it is still inside the PowerBook. It drains the battery down to the 1-volt-per-cell level, and then lets it recharge normally—makes lots of sense for those of us with only one battery and no external conditioner! Lind offers extraordinary customer support. If you have a problem with one of its products, it will bend over backwards to make it right.

Lind Electronic Design, Inc., 6414 Cambridge St., Minneapolis, MN, 55426, , 800-659-5956.
<http://www.lindelectronics.com>



The Madson Line PowerBook Bags

\$65 to \$250

The best constructed PowerBook luggage you can find. The quality of everything from the nylon or leather outsides to the padded insides is first rate. They last. Yet they are light weight, compact, and convenient. If you have a PowerBook, this is what to carry it in. A wide variety of looks and colors are available.

The Madsen Line, PO Box 338, Corte Madera, CA, 94976-0338, 415-927-3600, 800-851-1551.
<http://www.lena.com/madsonline>

HARDWARE

HARDWARE PROTECTION



Panamax Surge Protectors

\$45 to \$120

Perhaps the best surge suppressors made. The new models allow you to buy modules to attach to the main unit, to expand the number of plugs, phone outlets, etc. A very cost-saving feature. They can protect everything from your computer and home entertainment system to copiers and fax machines. If your system is damaged by a surge while connected to one of its protectors, Panamax will repair or replace it. They cost a bit more than the competition, but they're well worth the difference in cost.

Panamax, 150 Mitchell Blvd., San Rafael, CA, 94903-2057, 415-499-3900, 800-472-5555.
<http://www.panamax.com>



Safeware \$0 to \$2000 Safeware \$5000 to \$10,000

**\$50
\$120**

Did you know that most renter's insurance excludes computers? You have to ask for it specifically, and even then it is usually quite limited. Safeware has inexpensive computer insurance that covers theft and just about anything else that might damage your computer (except leaving a PowerBook unattended).

Safeware The Insurance Agency Inc., 5760 N. High St, Columbus, OH, 43085, 614-781-1492, 800-848-3469.
<http://www.safeware-ins.com>



PowerKey Pro PowerKey Remote

**\$100
\$40**

The PowerKey products provide a cheap and easy way to power up your Mac and run application remotely. The PowerKey Remote allows you to start up any Mac with a keyboard start-up capability from anywhere. PowerKey Pro adds surge protection, the power to start peripherals, restart your Mac, launch programs and run AppleScripts from any remote location with a telephone. Very handy power management device.

Sophisticated Circuits, Inc., 19017 120th Avenue, NE, Suite 106, Bothell, WA, 98011, 206-485-7979, 800-827-4669.
<http://www.sophisticated.com>

INPUT DEVICES



WACOM Art-Z II Tablets WACOM ArtPad II

**\$300 to \$2000
\$150**

For many years these affordable pads have been the best pressure-sensitive devices for the Mac. The latest pads come with a new "Ultra Erasing Pen" that has a second sensor tip that looks and acts just like an eraser on a pencil. This is one cool feature! These new pads also have the ability to sense the tilt of the pen to create even more realistic and detailed pen strokes. The pads connect via the ADB port and are a must for painting programs like Painter or Dabbler. They add a worthwhile dimension to any painting or graphics activity and are also great mouse replacements. Most graphics programs support the tablets, but it's wise to check first. While the smaller ArtZ II Tablets (6"x8") and ArtPad (4"x5") are big enough for most users, WACOM makes also Art-Z II Tablets as large as 18x25 inches. All WACOM tablets are worth considering. They're as close as you'll get to using a paintbrush on your Mac, and are great for playing Shanghai too. Be sure to check for reseller software bundles.

WACOM, Inc., 501 SE Columbia Shores Blvd., Ste. #300, Vancouver, WA, 98661, 360-750-8882, 800-922-6613.
<http://www.wacom.com>



Kensington Mouse Kensington Thinking Mouse

**\$60
\$70**

If you want a well-designed mouse that offers more than a single button, you can't beat the Kensington Mouse. As with the TurboMouse, software allows you to program the buttons, and simplify a variety of mouse tasks. Like other Kensington products, it comes with an excellent 5-year warranty and superb product support. For even greater versatility consider the 4-button Thinking mouse. Kensington also sells a solid, standard one-button, "Mouse-in-a-Box" for only \$40.

Kensington Microware Ltd., 2855 Campus Dr., San Mateo, CA, 94403, 415-572-2700, 800-535-4242.
<http://www.lensington.com>



Apple Extended Keyboard II

\$155

Apple's full keyboard, with FKeys, number pad, Power On key, and a few keys you'll probably never need! Once you've used one of these puppies, you'll never go back. It is well constructed with an excellent feel. It's quality makes it worth the higher price it commands. Try it. The only drawback is the larger footprint.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://productinfo.apple.com/productinfo/datasheets/af/keyboards.html>



Mac GamePad

\$30

Admit it. You like to play games on your Mac. But a mouse just doesn't cut it as a joy-stick. Get something designed for games. The Mac GamePad from Advanced Gravis does double duty. It combines a joy-stick, a Nintendo-style controller for multi-directional operation, and 4 programmable buttons. It is suitable for either right or left-handers. You can even get it bundled with Doom. Advanced Gravis also makes a line of dedicated joysticks for in-flight games.

Advanced Gravis Computer Technology Ltd., 3140 Mercer Ave. SE H, Bellingham, WA, , 604-431-5020, 800-663-8558.
<http://www.gravis.com>



Kensington Turbo Mouse 5.0

\$95

We have tried various types of trackballs, but the smooth feel, easy movement and light pressure it takes to click the nicely located buttons, make it the easiest and most comfortable trackball. You just don't have to work as hard with the Kensington. It even fits snugly up against the old Apple keyboard and takes up very little desk space. As a bonus, the TurboMouse software allows you to program the buttons (all 4 of them!), adjust the rate of cursor acceleration, and even make the cursor jump to a predefined spot on your monitor. Well done. The TurboMouse also has an excellent warranty and superb product support.

Kensington Microware Ltd., 2855 Campus Dr., San Mateo, CA, 94403, 415-572-2700, 800-535-4242.
<http://www.lensington.com>



Color QuickCam

\$200

The color version of the famous ball-shaped QuickCam adds a lot more than just color. Focus options and 24-bit color images at up to 640x480 pixels add versatility to the product. Although you are tethered to a Mac serial port, not free to roam as with a digital camera, you can make great use of your live pictures placing them on anything from a web page to a video conference screen using optional VideoPhone software (\$60). It's not photographic quality, but it can be a lot of fun. Accept its limitations and enjoy.

Connectix Corp., 2655 Campus Drive, San Mateo, CA, 94403, 415-571-5100, 800-950-5880.
<http://www.connectix.com>

MODEMS



USR Courier v. Everything

\$365

This is the modem that BMUG prefers for use on its BBSes. We've used USRs 24 hours a day for years, and buy as many as we can afford. It may be overkill for the home buyer, but they are great for heavy-duty use. It is also upgradable via Flash ROM. USR's software allows it to adjust speeds to match changing line conditions. What's more, US Robotics has special prices for sysops. These features and solid construction distinguish the v. Everything from cheaper, less reliable USR Sportster modems.

U.S. Robotics, Inc., 7770 Frontage Road, Skokie, IL, 60077, 708-982-5001, 800-342-5877.
<http://www.usrobotics.com>



Global Village PowerPort Platinum PC Card
Global Village PowerPort Platinum Pro PC Card

\$290
\$460

PowerBooks have become PC-Card capable (the 190's, 5300's, and 1400's) and PowerPort modems offer the best combination of performance, convenience and quality Mac-like software of any PC-Card modems out there. The "Pro" version features simultaneous 10Base-T Ethernet. These cards come with Global Village fax software which is solid and easy to use. Unfortunately software upgrades are not free and customer support could use some improvement. The modem is 28.8 Kbps (v.34).

Global Village Communications, Inc, 1144 E. Arques Avenue, Sunnyvale, CA, 94086, 408-523-1000, 800 736-4821.
<http://www.globalvillage.com>



Global Village TelePort Internet Edition

\$170

Today, no modem buyer should purchase anything less than a 28.8 Kbps modem. This latest version from Global Village actually bests that promising 33.6 Kbps under optimum conditions. The hardware is average. What sets it apart is the superb Global Fax software. If you want to use your computer modem as a fax, this is the modem to buy. The modem is Flash ROM upgradable.

Global Village Communications, Inc, 1144 E. Arques Avenue, Sunnyvale, CA, 94086, 408-523-1000, 800 736-4821.
<http://www.globalvillage.com>



3Com Impact ISDN External Digital Modem

\$400

The 3Com Impact ISDN digital modem offers access to the Internet at speeds of up to 128 Kbps (with both channels in use), yet is as easy to install and configure as an analog modem. The 3Com requires entry of the following information, the phone number of your Internet service provider, SPIDS (service profile identifier) numbers and telephone company switch type, which information can be obtained from your phone company. At BMUG, 16 members can login to the Planet via TCP/IP over the internet through BMUG's single ISDN line using and our 3Com ISDN digital modem, compared to the 16 individual analog lines. For more information about ISDN see "The Internet with ISDN" by Kevin M. Savetz in the Spring 1996 Newsletter on pg 205

3Com, Great America Site, 5400 Bayfront Plaza, Santa Clara, CA, 95052, 408-764-5000, 800-638-3266.
<http://www.3com.com>

Accessories



TeleDaptors

\$30 and up

These folks can get you phone line adapters for just about every country in the world. They also offer mini-kits for specific areas, a connector that will let you hook up to a digital phone system, as well as software utilities. They also have special "Road Warrior" packs, complete with an acoustic coupler.

TeleAdapt, 51 East Campbell Av., Campbell, CA, 95008, 408-370-5105, .
<http://www.teleadapt.com/products/padaptors>



Konexx Mobile Konnector
Konexx Desktop Konnector

\$150
\$120

Have you ever wanted to use your modem only to find that your phone line is digital, not analog? Many hotels and office phone systems are digital these days making the standard computer modem useless. There is one way around this problem: the Konexx Konnector. Plug in the Konexx Konnector between the handset and base unit of a digital phone and you'll be able to use your regular or PowerBook modem. Works off an external adapter or internal batteries. The Mobile Konnector runs off two 9-volt batteries.

Unlimited Systems, 8586 Miramar Place, San Diego, CA, 92121, 619-622-1400, .
<http://www.konexx.com>

MONITORS



Sony Multiscan 15sfl

\$470

The best small multiscan monitor on the market is the new Sony. It can display multiple resolutions and sports a series of digital controls with on-screen display for complete image adjustment flexibility. Maximum resolution is 1024 x 768. The monitor is inexpensive and meets MRP II/NUTEK/EPA standards. But if you can afford it, consider the extra screen space a larger monitor can provide.

Sony Electronics, Inc, Computer Peripheral Products Co., 3300 Zanker Rd., San Jose, CA, 95134, 800-352-7669.
<http://www.sel.sony.com/SEL/ccpg>



Sony Multiscan 17sfl

\$760

The best choice for most users. This next-generation Sony give you a large enough screen for most uses without breaking your wallet or overcrowding your desktop. It can display multiple resolutions and sports a series of digital controls with on-screen display for complete image adjustment flexibility. Maximum resolution is 1024 x 768. The monitor meets MRP II/NUTEK/EPA standards. A great choice for home or small business at a very good price.

Sony Electronics, Inc, Computer Peripheral Products Co., 3300 Zanker Rd., San Jose, CA, 95134, 800-352-7669.
<http://www.sel.sony.com/SEL/ccpg>



Sony Multiscan 20sfl

\$1620

If you do a lot of graphics or page layout work you'll need the extra screen real estate this 20" Sony can provide. Sharp text and good color clarity are the hallmarks of the new generation Trinitrons. Controls are digital with on-screen display. Maximum resolution is 1024 x 768. Although many other makers sport Sony CRT's, Sony usually has the best quality tubes in its own displays. The monitor meets MRP II/NUTEK/EPA standards.

Sony Electronics, Inc, Computer Peripheral Products Co., 3300 Zanker Rd., San Jose, CA, 95134, 800-352-7669.
<http://www.sel.sony.com/SEL/ccpg>

Accessories



KlearScreen (8 oz.) Klear Kloth (pack of 6 - 11" x 12" cloths)

**\$10
\$6**

An environmentally-friendly computer cleaning spray and polishing cloth. A small bottle contains enough fluid to clean a two-page display 300 times; it's also great for your glasses. You shouldn't use ammonia- or alcohol-based cleaners on screens, since they may react with the plastics. As an added bonus, it is the only screen-cleaning product endorsed by Apple Computer for use with its displays.

Meridrew Enterprises, P.O. Box 113, Danville, CA, 94526-0113, 510-838-8774, 800-505-5327.
<http://www.klearscreen.com>

PRINTERS

Inkjet Printers



Apple Color StyleWriter 2500

\$350

The 2500 is a superb choice for home or business. This successor to the 2400 is much faster and boasts a greater resolution (720x360) than its predecessor. Uses either a 4-ink cartridge (with two tanks; one for CYM inks and one for black) or black only cartridge. It can even be used on a network with a LocalTalk interface (\$100) or EtherTalk Adapter (\$200). For \$50 you can get the Adobe/GDT Personal Publishing Toolkit which includes GDC's StyleScript PostScript interpreter. Buy it. It is well worth in speed, performance, and greatly improved graphics on EPS images. All-in-all, an excellent package at a bargain price. If you can't afford this printer, consider the Color StyleWriter 1500 at \$280, but the extra money for the 2500 is definitely worth it.

Apple Computer, Inc, 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://product.info.apple.com/productinfo/datasheets/im/colorsw2500.html>



Apple Color StyleWriter 2200

\$380

Need to take a color inkjet on the road? This is the printer to take. At only 3 pounds inside a 12-inch wide black case, the 2200 can run off a standard circuit or from an optional battery pack. It produces great text and well saturated colors at the same 720 x 360 dpi (text) or 360 x 360 dpi (color) resolution as its desktop cousin, the Color StyleWriter 2400. It even matches the 2400's speed. The only drawback is that a single ink cartridge (which includes black) must be tossed once one of the ink colors you want is used up. Nevertheless, it makes a great partner to a PowerBook or Duo. Investing in an optional battery attachment is probably a good idea.

Apple Computer, Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://product.info.apple.com/productinfo/datasheets/im/colors2200.html>

Laser Printers



Hewlett-Packard LaserJet 5M

\$1900

This HP printer is the clear choice for office environments. It boasts top quality text, superb grayscale graphics, and good speed, although a bit slower than the Apple LaserWriter 16/600PS on text only files. It comes standard with 6 Megs of RAM, upgradeable to 52 Megs, has Ethernet 10BaseT and LocalTalk network connectors, and a SCSI port for downloading fonts. The printer incorporates PostScript Level 2 and PCL6 (the latest version). Legal size paper is accommodated. There is no straight through paper path for heavy stock however. To save toner, there is an EconoMode for drafts, and the printer is Energy Star compliant. This printer should fit the bill for most business needs. If you need to print on tabloid-size paper, consider the Hewlett-Packard LaserJet 4MV at about \$1000 more.

Hewlett-Packard Co., 19310 Pruneridge Ave, Cupertino, CA, 95014, 408-246-4300, 800-752-0900.
<http://www.hp.com>



Apple Color LaserWriter 12/600PS

\$6000

Considering a color laser printer? As prices drop and the technology improves, such printers are becoming a viable choice for high-end business use. With the Color LaserWriter 12/600PS, Apple is leading the way. It is fast and remarkably easy to set up and use. It is rated at 12 ppm for monochrome, and 3 ppm for two or more colors. Resolution is limited to an excellent 600 x 600 dpi with Apple's Color PhotoGrade resolution providing the equivalent of a 200-lpi halftone screen and 122 possible gray levels for each color. The printer comes with 12 Megs of RAM upgradeable to 40 Megs using 72-pin SIMMs. The printer can be hooked into LocalTalk, parallel or Ethernet lines with support for a wide variety of protocols.

Apple Computer, Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://product.info.apple.com/productinfo/datasheets/im/lw16-600ps.html>



Hewlett-Packard LaserJet 6MP

\$950

It's fast (rated 8 ppm), it's sharp with 600 x 600 dpi resolution and very well priced. This newest HP personal printer is Postscript Level-2 and boasts 2 paper trays holding a total of 350 sheets as standard equipment. Print quality is among the best and has a straight-through paper path to make envelope and label printing smoother. For IrDA-compliant PowerBooks there is an infrared port for wireless transfers. No reason to look anywhere else.

Hewlett-Packard Co., 19310 Pruneridge Ave, Cupertino, CA, 95014, 408-246-4300, 800-752-0900.
<http://www.hp.com>

Printer Accessories



Jet-Master—Refill for DeskWriter cartridges

\$15-\$25

Computer Friends sells refill kits for all inkjet printers. What sets them apart from most of the competition is that they also sell ink by the bottle—as much as a gallon! Most other companies who sell ink only offer throw-away refill kits—definitely not sensitive to the environment. You can easily refill your DeskWriter cartridges with a syringe (included in the kits) for an economical price.

Computer Friends, Inc., 14250 NW Science Park Dr., Portland, OR, 97229, 503-626-2291, 800-547-3303.
<http://www.cfriends.com>

**Jet Paper Products****call for prices**

These people have an absolute passion for paper. They offer many different high-quality papers especially suited for inkjet and laser printers, including 100 percent recycled and rag flavors. They offer a sample pack for only \$4.95, including postage.

Jet Paper Company, PO Box 860, Everett, MA, 02149-0860, 800-235-4538, .

**Paper Direct****call for prices**

This company has many unusual papers and paper products. If you want prefabricated graduated color brochures for your laser printer, or stock with "engraved" certificate borders, check out Paper Direct's catalog. It's free, impressive and practical.

Paper Direct, 205 Chubb Ave, Lyndhurst, NJ, 07071, 800-272-7377, .

**American Ink Products****Price varies**

These guys have been making printer ink products for a decade. They offer do-it-yourself refill kits, colored inks, etc., and are our local source for inkjet refills.

American Ink Products Company, 630 E.10th St., Oakland, CA, 94606, 510-268-0825, 800-414-6546.
<http://www.americanink.com>

**TonerTuner 1.0.8****\$20**

If you ever wanted to save on toner and be able to print in "draft" mode on a laser printer, TonerTuner is for you. An extension, it adds a control to the standard Print dialog of Mac applications that lets you set how dark to make your output. Why use more toner than you need? The standard product has "off" as the default setting. If you want Toner Tuner "on" as the default, just ask customer support.

Working Software, Inc., PO Box 1844, Santa Cruz, CA, 95061-1844, 408-423-5696, 800-229-9675.
<http://www.working.com>

**StyleScript 3.0****\$100**

Inkjet printers have difficulty printing postscript images well. StyleScript "smooths the jaggies" as if your HP or Apple inkjet were a postscript printer. If you print color images, the differences can be dramatic. Apple offers a half-price coupon with Stylewriter2500's

GDT Softworks Incorporated, , , , 604-291-9121, 800-330-9633.
<http://www.glt.com>

SCANNERS**HP ScanJet 4c****\$900**

The latest HP color scanner quickly handles black & white, grayscale, and one-pass 30-bit color scanning at 600 dpi (software dithered to 2400 dpi). It's among the fastest and most accurate scanners for the Mac and is able to detect details even in deeply shadowed areas. Yet it's easy to use and fairly bulletproof. The scanning area is 8.5" by 14", so it takes up a lot of desk space. It doesn't use Photoshop plug-ins but is TWAIN compliant. It is bundled with Caere OCR software and Photoshop 2.5 (called "LE"), and it can be used to make color and black-and-white copies with its DeskScan software. But perhaps the biggest change in this new model is the Visioneer PaperPort software that allows this scanner to annotate, organize and link documents. It is a very versatile package. Transparency adapter (\$630) and sheet feeder (\$490) options are available.

Hewlett-Packard Co., 19310 Pruneridge Ave, Cupertino, CA, 95014, , 800-752-0900.
<http://www.hp.com>



UmaxVista-S6E

\$280

Umax has long been a leading maker of Mac and PC scanners. The new Vista-S6E is an exceptional scanner at a bargain price. It is fast and a well designed software makes image tweaking relatively easy. You have a choice, AutoSetup which does the tweaking automatically or adjust things manually. The scanner is 300 dpi compared to the HP's 600 dpi and is only 24-bit, not 30-bit like high end scanners. But most users won't notice these differences. Bundled software includes Adobe Photo Deluxe and PageManager CD-ROM. A transparency adapter ia a \$300 option.

Umax Technologies,3353 Gateway Blvd., Fremont,CA,94538,510-651-4000,800-562-0311.
<http://www.umax.com>



Visioneer PaperPort Vx

\$280

This little 12.5 inch wide beauty has revolutionized scanning. Its convenient size means you can keep it next to your Mac at all times. Just insert the document you want to copy form business card to ledger size and larger and the PaperPort automatically turns on. When its done, it turn off. Meanwhile the OCR software and SharpPage technology allow you to manipulate text and make use of it as you wish. The Vx includes Corex CardScan, OmniPage LITE OCR and PictureWorks Copier software. For better speed, purchase the \$70 SCSI adapter.

Visioneer,34800 Campus Drive, Fremont,CA, 94555,415-812-6400,800-787-7007.
<http://www.visioneer.com>

SCSI ACCESSORIES AND ENHANCEMENTS



APS SCSI DOC

\$30

Have you ever tried to connect your PowerBook with its square SCSI socket to a standard SCSI cable? You can't do it, unless you have SCSI DOC. It's a heavily shielded SCSI connector with a male HDI-30 at one end and a female DB-25 SCSI connector at the other. Includes a switch for putting dockable PowerBooks into docking mode and saves you the trouble of carrying around a PowerBook-specific SCSI cable.

APS Technologies,6131 Deramus Ave,PO Box 4987, Kansas City, MO, 64120-0087,816-483-1600,800-926-0390.
<http://www.apstech.com>



Hurdler SCSI Serial Expansion Hurdler Serial Boards

**\$450 (4) / \$350 (2)
\$350 (4) / \$150 (2)**

If you find yourself with more serial devices than can connect to your Mac at any one time, consider the Hurdlers. As a stand alone unit, or as a NuBus board, the Hurdler provides 2 or 4 fast serial ports (57,600 baud per port) and the software necessary to insure that your Mac can use all of them. A good solution to a not uncommon problem.

Creative Solutions, Inc.,7509 Connelley Drive, #D, Hanover,MD, 21076,410-766-4080,800-367-8465.
<http://www.scsn.net/csi>



APS SCSI Sentry

\$40

Few things can be more frustrating than an uncooperative SCSI chain. This digital active terminator monitors the chain and provides the appropriate termination where needed. Great headache reducer.

APS Technologies,6131 Deramus Ave,PO Box 4987, Kansas City, MO, 64120-0087,816-483-1600,800-926-0390.
<http://www.apstech.com>



SCSIProbe 4.3

Freeware

SCSIProbe displays a list of the SCSI devices connected to your Mac. For each device, it lists the SCSI ID, type of device, manufacturer, product number, and version of the driver. It can reset the SCSI bus and mount unmounted devices. It even works with the multiple SCSI busses on the newer Macs. Alas, there are compatibility issues with System 7.5.

Robert Polic, , , , , .

SCSI DRIVES


Zip100 Drive
100-meg cartridge
\$130
\$15 to \$20

This amazing floppy drive from Iomega, the masters of the floppy media, is cheap and very cool. It's elegance of design and ease of use puts it above the competition. If you need quick and easy removable media storage for small scale archiving or transportation, we highly recommend this product. Epson and other companies repackage this drive, often at a better price.

Iomega, 1821 W Iomega Way, Roy, VT, 84067, 801-778-1000, 800-697-8833.
<http://www.iomega.com>


APS ProDAT
APS HyperDAT Pro
\$650 int / \$700 ext
\$950 int / \$1000 ext

If your business needs to backup a lot of material reliably, consider a DAT drive. The tape media is inexpensive, and the newer DAT drives are fast. The ProDAT can backup up to 4 GB of data with a 120M tape cartridge, and the HyperDAT Pro can handle up to 8 GB on a single 120M tape and support transfer rates of up to 50MB per minute. With Retrospect backup software, backups can be easy. Despite growing competition, DAT remains the archivers a choice of media for massive backups.

APS Technologies, 6131 Deramus Ave, PO Box 4987, Kansas City, MO, 64120-0087, 816-483-1600, 800-926-0390.
<http://www.apstedh.com>


APS CD-R Drive
\$700

While the prices of many computer peripherals have dropped, few have dropped so fast or have larger implications than the drop in recording CD-ROM drives. The prices are approaching the point where an average business or individual can afford one, and produce their own products, databases, and archives in-house. Many resellers are producing quality drives high-quality recording CD-ROM drives. What sets the 2x speed APS apart is its very low price and excellent CD writing software, Astarte's Toast CD-ROM Pro. (Be sure to confirm that your drive includes it as prices and packages change periodically.) If you produce CD-ROMs or want to, this is a great tool to start with. Just be careful. Finicky SCSI connections take on a new meaning when a CD-R drive is in your SCSI-chain. 4x CD-R's are beginning to appear but cost 50% more.

APS Technologies, 6131 Deramus Ave, PO Box 4987, Kansas City, MO, 64120-0087, 816-483-1600, 800-926-0390.
<http://www.apstedh.com>


APS Hard Drives
Prices Vary

1.2 Gig drives for under \$250, and drive prices continue to drop! For many years APS has provided quality hard drives at very good prices. Each drive comes with Power Tools formatting software, a special APS version of CharisMac Engineering's well-regarded Anubis software. Unlike CharisMac or other drive developers like FWB, APS provides upgrades free of charge over its web site. This is a substantial savings as drivers need to be regularly updated with every adjustment to the Mac OS and product line. At \$25 or more a pop, those updates can get very costly. The free PowerTools updates make APS drives an even bigger bargain.

APS Technologies, 6131 Deramus Ave, PO Box 4987, Kansas City, MO, 64120-0087, 816-483-1600, 800-926-0390.
<http://www.apstedh.com>


APS CD 8
\$200

CD-ROM drives keep getting faster with 8x being the current standard, although there is still little out there that makes use of this speed. The drives are pretty much interchangeable. So go for price, software and support. APS uses an NEC mechanism and a customized version of Annubis CD-AutoCache. Although faster than a 4x drive, there is little need to upgrade from a 4x unless you do large database work off your drive. Available as an external or internal drive for the same price.

APS Technologies, 6131 Deramus Ave, PO Box 4987, Kansas City, MO, 64120-0087, 816-483-1600, 800-926-0390.
<http://www.apstedh.com>

SPEAKERS



SoundWorks MicroWorks

\$200
\$320

For richer sound and deeper bass consider these ultra compact 3-piece systems. Each package is self powered, with the amp and control panel in the larger woofer cabinet. The Soundworks system is smaller (especially the woofer) and has no separate input for an external CD-ROM player however. It's rated at 18.5 watts. The larger and more powerful 66 watt MicroWorks system (still very compact) provides excellent sound equaling more expensive speaker sets. An excellent instruction manual helps you with everything, including placement of the subwoofer. Cambridge Soundworks has retail stores in much of the US. But don't forget. If you already have stereo speakers in your computer room, all you may need is a simple adapter to plug you Mac into the best, and cheapest sound option of all.

Cambridge SoundWorks, 311 Needham Street, Newton, MA, 02164, 617-332-5936, 800-367-4434.
<http://www.hifi.com>



Yamaha YST-M15

\$70

If you are looking for an affordable 2-speaker system, the new Yamaha's are a good choice. They deliver crisp, clean sound and reasonable bass despite lacking a woofer module. The handy controls are on the right speaker along with a headphone jack. For richer bass consider the Cambridge SoundWorks 3-piece system rather than the Yamaha subwoofer which brings the Yamaha system up to the Cambridge price.

Yamaha Corporation of America, 6600 Orangethorpe Ave, Buena Park, CA, 90620, 714-522-9011, 800-492-6242.
<http://www.yamaha.com>

RESOURCES

BOOKS

Design and Style Guides



The Mac is not a typewriter

\$10

If you use a Mac and ever go anywhere near a printer, you should buy this book. It sets forth common-sense guidelines for typesetting, and explains them well. Robin Williams has done a wonderful job of lending insight to the printed page and to Mac users everywhere. It should help anyone make pages that are just a little easier on the eye.

Peachpit Press, 2414 Sixth St., Berkeley, CA, 94710, 510-548-4393, 800-283-9444.
<http://www.peachpit.com>



The Non-Designer's Design Book

\$15

Another excellent book from Robin Williams. A slim, concise distillation that will guide you around the most common pitfalls of document design. You don't need to be a desktop publishing artist to produce eye-grabbing output.

Peachpit Press, 2414 Sixth St., Berkeley, CA, 94710, 510-548-4393, 800-283-9444.
<http://www.peachpit.com>



Design Essentials, Second Edition Imaging Essentials

\$40
\$40

These two books from Adobe Press describe a variety of production techniques to help the budding graphic artist combine the capabilities of separate software to create effects that cannot be achieved with a single application. The first book, Design Essentials, has an emphasis on PostScript-based illustrations incorporating digital photographs. The second book, Imaging Essentials, spins digital photo manipulation to expert levels and includes a section updating the first book's projects for newer software. Although Adobe software is featured in these books any digital artist can find ideas for solving those "how can I do this" blues.

Hayden Books

, 201 W. 103rd St., Indianapolis, IN, 46290, 317-581-3718, .
<http://www.mcp.com/hayden>

**Adobe Classroom in a Book Series****\$29 to \$35**

Who better but Adobe to produce the definitive book on using Illustrator, Photoshop, Advanced Photoshop, Premiere and PageMaker. Each book includes a CD-ROM with projects to provide hands on training experiences.

MacMillan Books, , , , ,
<http://www.mcp.com>

Using the Mac**Zen and The Art of Resource Editing****\$15**

A long-time favorite at BMUG, the ResEdit book is in its fourth edition. Although we are a bit biased about it, all the major Mac magazines agree that it's the best book for beginning and intermediate ResEdit users. The December '92 MacUser ranked it in the top 100 Mac products. A CD-ROM is loaded with cool stuff, including the latest edition of ResEdit.

BMUG, Inc., 1442A Walnut St., #62, Berkeley, CA, 94709-1496, 510-549-2684, 800-776-2684.
<http://www.bmug.org>

**Creating a Healthy Work Environment****Free**

After spending thousands on your software and hardware, don't overlook your most important piece of equipment: your body. This little 12-page pamphlet addresses basic health concerns from basic repetitive-stress, eye fatigue to hardware setup health issues. It even mentions laser printer ozone pollution. You can even use it to help educate your boss.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, .
<http://www.apple.com>

BOOKS**Internet Starter Kit, 3d Edition****\$22**

Adam Engst, creator of TidBITS (the weekly online news publication), has created a readable, entertaining, and thoroughly enjoyable book for those just starting out on the Internet—and that's no easy task. It comes bundled with a number of nifty Internet utilities.

Hayden Books, 201 W. 103rd St., Indianapolis, IN, 46290, 317-581-3718, .
<http://www.mcp.com/hayden>

BOOKS**Sad Macs, Bombs, and Other Disasters, Second Edition****\$25**

The best book for finding out what's wrong with your Mac. Edited by Lauren Antonoff and Betsy Brahm, two long-time BMUGers, this book explains things in terms you can understand. Author Ted Landau, a writer for MacUser, did a good job of making this book accessible to just about everyone. This second edition adds information covering all the latest Macintosh models.

Addison-Wesley Publishing Co., 1 Jacob Way, Reading, MA, 01867, 617-944-3700, 800-358-4566.

**The Little System 7.1/7.5 Book****\$10**

Highly acclaimed guide to System 7 and 7.5, packed with helpful information and tips. Both beginners and advanced users will find clear and concise answers to many System questions.

Peachpit Press, 2414 Sixth St., Berkeley, CA, 94710, 510-548-4393, 800-283-9444.
<http://www.peachpit.com>

**Power Macintosh Programming Starter Kit****\$30**

The complete guide to Power Macintosh concepts, run-time architecture, and sample code. Includes a CD-ROM with a demo version of Metrowerks CodeWarrior. It's a great introduction for anyone looking to get her feet wet in programming.

Hayden Books, 201 W. 103rd St., Indianapolis, IN, 46290, 317-581-3718, .
<http://www.mcp.com/hayden>



Macworld Complete Mac Handbook, 4th Ed.

\$35

Jim Heid brings together sound advice, reviews, and insights into the latest technologies in as good an encyclopedia of Mac-info as you are likely to find. A bundled CD-ROM contains an interactive version of the book filled with technical diagrams, industry profiles (including a very flattering overview of BMUG), new technology explorations (with QuickTime 2.0 and System 7.5) plus 60 megs of the Best of BMUG Shareware.

IDG Books Worldwide, 155 Bovet Rd. #310, San Mateo, CA, 94402, 415-312-0650, 800-434-3422.
<http://www.idgbooks.com>



Dead Mac Scrolls

\$12

Superb guide to troubleshooting and repairing older Macs from technical guru, Larry Pina. Problems are clearly set identified, and if you have a little bit of courage and aren't afraid of a soldering iron, you can save a lot of money and keep your Mac running like a dream.

Peachpit Press, 2414 Sixth St., Berkeley, CA, 94710, 510-548-4393, 800-283-9444.
<http://www.peachpit.com>

COFFEE



Café Firenze

\$1.80/ Large Double Mocha

Join Team Caffeine! This Newsletter certainly wouldn't be in your hands right now if Firenze didn't make such a damn good cup of coffee—their mochas are to die for. We just wish they would stay open twenty-four hours a day, so we wouldn't ever have to go to sleep.

Café Firenze, Shattuck & Center, Berkeley, CA, 94704, . . .

MAGAZINES AND JOURNALS



Macworld

\$25 per year

In this age of shrinking magazines, Macworld Magazine continues to print close to the same number of editorial and review pages, even though it now has fewer ads. The articles, columns, and charts continue to improve, with many more individual products being reviewed in each issue than were in years past. Not as punchy or hard hitting as MacUser and the ratings can be hard to fathom. Sometimes the same product gets different star ratings in the same issue!

Macworld Subscription Services, PO Box 54529, Boulder, CO, 80322-4529, 415-267-1743, 800-234-1038.
<http://www.macworld.com>



MacUser

\$27 per year

MacUser Magazine continues to produce relatively hard-hitting reviews, and they get points for taking risks and being crankier than Macworld. MacUser Labs can do great things, but they are occasionally inexplicably contradictory or inconsistent. The features are first rate with regular reports on everything from networks to kids software. The look seems a bit cluttered and less visually interesting than Macworld, and it lacks any index of past articles between the annual comprehensive indexes.

MacUser, PO Box 56986, Boulder, CO, 80322-6986, 303-447-9330, 800-627-2247.
<http://www.ziff.com/~macuser/>



BYTE

\$30 per year

BYTE is the oldest computer magazine around. It came into the Mac world somewhat late, but has made up for it with timely and well-researched Mac articles. They print the kind of articles that the mainstream Mac magazines won't: articles full of technical jargon about how the Mac really works, and good articles about those other machines. They even have an 800 number for subscriptions, an idea the other Mac magazines might want to "borrow." Great in-flight reading material.

BYTE Subscription Dept., PO Box 555, Hightstown, NJ, 08520-0555, 800-257-9402.
<http://www.byte.com>

**MacWEEK****\$120 per year**

With generally good reviews, some serious investigative reporting, and the best gossip column this side of the checkout stand, MacWEEK is still the only Mac magazine worth lying for. The writing is lively, the ads in the back have the lowest prices available, and the MacInTouch column reminds us of what the Mac world was like a decade ago. Unfortunately, it is available only by subscription, at \$125 per year, unless you have 20 to 5000 computers on hand and control a million-dollar budget, in which case it's free. Better still, log on to the MacWeek Web site. The articles go online on the Friday before the printed edition hits the mailboxes!

MacWEEK, Customer Service Dept., c/o JCI, PO Box 1766, Riverton, NJ, 08077-7366, 609-461-2100, .
<http://www.zdnet.com/~macweek>

**Macintosh Product Registry****\$40 per year**

If you have ever wanted a comprehensive list of Mac programs and products complete with descriptions, company names, addresses, and phone numbers—except for games—this is the magazine to get. They also publish this information on a CD-ROM (with a mediocre HyperCard interface) for \$99. We refer to this book daily in the BMUG business office and at our Helpline clinics. (We also used it extensively to gather information for the Choice Products listings!) Quite an indispensable publication.

Redgate Communications Corp., 660 Beachland Blvd., Vero Beach, FL, 32963, 407-231-6904, 800-333-8760.

**MicroTimes Magazine****Free in CA!**

In addition to David Morgenstern's BMUG column, this monthly magazine has news, articles and reviews covering many different flavors of CPU—and ads, ads, ads. MicroTimes also has superior coverage of computer-related legal and social issues.

BAM Publications, Inc., 3470 Buskirk Ave, Pleasant Hill, CA, 94523, 510-934-3700, .
microx@well.com

**Seybold Report on Desktop Publishing****\$245 per year**

If you are really into desktop publishing and have the bucks to burn, this is the publication for you. As you can imagine, it covers every facet of print publishing hardware and software. It also covers color pre-press systems and some non-print publishing technologies like CD-ROM and networked document systems.

Seybold Publications, PO Box 644, Media, PA, 19063-0644, , 800-325-3830.

ONLINE**TidBITS****Free**

This online mailing from Adam Engst is one of the best sources for up-to-the-minute rumors, news, and tidbits. He gets them out on the Internet fairly regularly and is almost always on top of all the latest gossip; he often has the nitty-gritty details that companies don't really want us to know. There are product reviews, as well.

Adam Engst, 1106 North 31st Street, Renton, WA, 98056, .
<http://www.tidbits.com>

**Apple Computer's Worldwide Disability Solutions Group**

A source of answers on how to make best use of your Mac. The Mac Access Passport is a comprehensive database of access products and is available for free from Apple.

Apple Computer, Inc., 1 Infinity Loop, Cupertino, CA, 95014, , 800-600-7808.
<http://www.apple.com/disability>

**Ric Ford's Macintosh Web Page**
<http://www.macintouch.com>

Want the latest info on products, updates, and press releases? Check out Ric Ford's excellent Macintosh Web page. It even has links to the specific companies in the news. It's simply the best source for the latest info.

,,,,,,
<http://www.macintouch.com>



Guy Kawasaki's MacWay EvangeList

free

Get the latest news, product info and special offers direct to your email box from one of the most enthusiastic Mac-o-philes around, Guy Kawasaki. Just send you email address to listproc@solutions.apple.com and include "Subscribe MacwayYourName" in the message.

, , , , , ,



Ted Landau's MacFixIt **<http://www.macfixit.com>**

The most current reports of hardware glitches and software bugs with hot links to companies and bug fix sites. Great place to check if you have a problem getting your Mac to run as you'd like...

, , , , , ,

<http://www.macfixit.com>



Mac Central **<http://www.maccentral.com>**

Another excellent source of news in the Mac OS community with late breaking stories and information on new products and software updates...

, , , , , ,

<http://www.maccentral.com>

PURCHASING MAC PRODUCTS



ComputerWare

One of the first Mac-only store chains in the country, ComputerWare is still providing reasonable deals on hardware and software, and some good information and tips, if you corral one of the better salespeople. They also offer GE Consumer Service as a lower-cost replacement for AppleCare, Apple's very expensive program to extend Apple warranties (BMUG doesn't recommend AppleCare, due to the high cost). Definitely a store to visit when looking for Mac accessories.

ComputerWare, (check your local phone book), , , , , .



User Group Store

As a BMUG member you have a great opportunity to purchase new and refurbished hardware, and the latest software directly from the User Group Store. Prices are often below street price. Products are thoroughly checked out and shipped quickly. Many BMUGers have taken advantage of their great offers. There is one disclaimer. BMUG benefits from every product you buy. The more BMUG members buy, the more points BMUG accumulates toward products BMUG can they acquire and use to better serve our membership. A true "win-win" situation...

User Group Connection, 2840 Research Park Drive, Suite 100, Soquel, CA, 95073, , 800-350-4842.

<http://www.ugstore.com>

MACadam

This has to be the place to find out about Macintoshes and the things that make the intosh a wonderful computer. They aren't perfect, but they try hard and have some of the best pricing and selection in the bay area. Go in and talk to Hal or Tom and see if they can help if you have a question about Macs.

MACadam, 1062 Folsom St. San Francisco, CA 94103

(415) 863-6222, Fax (415) 863-6498

REPAIRING YOUR MAC

DriveSavers



These guys get data out of flaky hard drives that disk recovery software like MacTools Pro and Norton Utilities can't touch. They'll also do PC, Novell, and UNIX recoveries. They aren't cheap, but if you really need your data back, nothing is too expensive.

DriveSavers, 400 Bel Marin Keys, Novato, CA, 94949, 415-382-2000, 800-440-1904.
<http://www.drivesavers.com>



San Francisco State University Bookstore Computer Service Center

If you are in the San Francisco area, a great place to go for service is the San Francisco State University Bookstore Computer Service Center. They are a fully authorized Apple service center and can take all comers, whether a SFSU student or not. It's run by long time BMUGer and help line wiz Bill Nolan with a great staff including BMUGer and regular helpline coordinator, webmaster and Filemaker Pro guru, Lorca Hans, and BMUG's own award-winning Planet Administrator, Chris R. Harris. They know what they're doing, which can be a nice change of pace from your average repair shop.

SFSU Bookstore Computer Service Center, Cesar Chavez Bldg., 19th and Holloway, San Francisco, CA, 415-338-6216, .
<http://www.bookstore.sfsu.edu>



CJS Systems

N/A

After several years of repairing Macs, CJS is still one of the best Mac repair places in the Bay Area. They are very friendly and will try to really fix things rather than just swap out parts. In case you haven't been there in a while, they closed up shop for a while in 1996, but have recently re-opened in the same place. Welcome back CJS!

CJS Systems, 2750 Adeline St, Berkeley, CA, 94703, 510-849-3730, Fax, (510) 849-4935

SOFTWARE

BACKUP



DiskFit Pro 1.1 DiskFit Direct

\$75
\$30

It is amazing how easy backing up can be if you have a well designed backup program, such as DiskFit Pro. The point of DiskFit is that it's inexpensive, not all-inclusive. For even less money, you can get DiskFit Direct, for very simple backups. This program is perfect for the individual home user. It will encourage you to do the task we all avoid—backup!

Dantz Development Corp., 4 Orinda Way, Bldg. C, Orinda, CA, 94563, 510-253-3000, .
<http://www.dantz.com>



Retrospect 3.0A Retrospect Remote 3.0A with Remote 10 pack

\$145
\$260

Retrospect is easy to use, attractive, and, above all, extremely reliable. Head and shoulders above the competition, it offers compression, error-checking, scheduling, and compatibility with more drives than anything else on the market. The latest version has EasyScript to automate the process. Retrospect is a complete product with every feature you'll need.

Dantz Development Corp., 4 Orinda Way, Bldg. C, Orinda, CA, 94563, 510-253-3000, .
<http://www.dantz.com>

DATABASE



4th Dimension 3.5.3 **4th Dimension Server Version 1.5.3 (2 users)**

\$680
\$990

4th Dimension is the premier database package for the Macintosh when you are dealing with massive numbers of records. Its interface is relatively easy to use, considering its power. This fully relational database is the program BMUG uses to keep track of members and purchases. It includes support for multiple active windows, background processes, and the ability to make developmental changes on the fly. The pared-down version, 4D First is a less powerful version which is not multi-user capable nor much simpler. We can't recommend it.

ACI US, 20883 Stevens Creek Blvd., Sunnyvale, CA, 95014, 408-252-4444, 800-384-0010.
<http://www.acius.com>



FileMaker Pro 3.0v3 **FileMaker Pro Server**

\$185
\$900

It's been a while coming, but with version 3, FileMaker Pro is now a fully relational database. And it's faster now that it supports the PowerPC. Scripting and calculating are improved, and with an excellent Windows version, this is the best cross-platform database out there. Even usable file size has been upped. Combine all this power with a low price and relative ease-of-use, even for beginners, is it any wonder that when someone comes into the BMUG office and asks about database programs, 90% are referred to FileMaker? The Server version speeds things up considerably on a network. Upgrades are readily available for only \$100.

Claris Corp., 5201 Patrick Henry Dr., PO Box 58168, Santa Clara, CA, 95052-8168, 408-987-7000 (customer relations), 800-325-2747 (U.S. dealers).
<http://www.claris.com>



Panorama 3.03

\$220

Panorama takes a different approach to database software. The program is entirely RAM based making it blazing fast. Its extensive macro system aids direct text import making merges easy and almost instantaneous. Various forms are included that would make users of other database programs jealous. SuperObjects let you create your own forms just by dragging buttons, boxes or text boxes into a window. Links are easy to create. Although it is best suited to smaller business and database needs, its performance is hard to top.

ProVue Development Corp., 18411 Gothard Street, Huntington Beach, CA, 92648, 714-892-8199, 800-966-7878.
<http://www.provue.com>

Accessories



Informed Manager

\$100

Shana has recently upgraded and integrated its programs that allow you to design "intelligent" forms that are ready to be filled out on screen. Tab delimited fields and popup choices make completing the forms easy. It will even do the math for you. The forms can be emailed to others via ccMail, Eudora, PowerTalk, MSMail, and QuickMail. Various add-ons are ready when you want to grow onto a network. The Informed Designer CD-ROM is included. (This CD-ROM has been distributed free over the past year and is a great introduction to this product.)

Shana Corp., 9744 - 45th Avenue, Edmonton, Alberta, Canada, T6E 5C5, 403-433-3690, 800-386-7244.
<http://www.shana.com>



GeoQuery 5.0

\$200

For complete business mapping needs including the location of every 5-digit ZIP code and over 26,000 places, plus 225,000 miles of highways, GeoQuery is an excellent choice. It easily imports and incorporates information from your own data bases and from programs such as FileMaker, Excel and many others. It even has links to NOW Contact and TouchBase Pro. Data can be shown as pushpins or shaded areas. The interface is a bit cludgy, and even on a PowerPC some map builds take time. Yet it remains the best way to gain a geographical perspective on your data without hiring a cartographer.

GeoQuery Corp., 387 Shuman Blvd., Suite 385E, Naperville, IL, 60563, 313-944-9280, 800-541-0181.



Street Atlas USA 3.0 (CD-ROM)

\$20

Incredible as it may seem you can locate virtually any street in the US with Street Atlas USA. Search by street name, ZIP code or telephone exchange and zoom in and out with the click of a mouse. The new version provides links to certain phone search databases

and allows you to customize the maps. There are a few errors here and there, as with any atlas, but where else can you find this level of detail in such a compact and easy to use form, and for so little money?

DeLorme Mapping, Lower Main Street, P.O. Box 298, Freeport, ME, 04032, 207-865-1234, .
www.delorme.com



SelectPhone 4.0

\$100

It's like having every phone directory on a CD-ROM...er, 6 CD-ROMs actually. SelectPhone is the most Mac-like and most accurate of the directories out there. It's SmartFind feature works well, and GeoTarget lets you set your search boundaries. Available in a variety of different packages, it is updated quarterly, although updates are pricey.

Pro CD, , , , 508-750-0055, 800-992-3766.
http://www.procd.com



Tango for Filemaker Pro

\$300

If you want to publish your Filemaker database on the Web, you need Tango. It's easy-to-use graphical interface bypasses calculating and HTML coding required by other Common Gateway Interfaces. Drag and Drop your fields if you like or use pop up menus. HTML is created automatically. Tango also includes some display formatting options. Controlling access to portions of your database and responses to requests is easy with Query Builders tools. There are some scripting quirks and Tango ain't fast, but it's the best option currently available.

EveryWare Development, , Mississauga, ON, Canada, 905-819-1173, 888-819-2500.
http://www.everyware.com

DIGITAL VIDEO



QuickTime 2.5

Appleware (Free)

QuickTime has set the standard for digital video across the Mac-Windows barrier. Capable of playing back movies, doubled to fill a 13-inch screen at 30 frames per second, this technology has gone from amazing to astounding. QuickTime 2.5 also supports MIDI and plug-in MIDI-instrument libraries. The latest upgrade improves MPEG and Motion JPEG support.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-538-9696 Dealer Locations.
http://www.apple.com



Peter's Player 1.1

\$20 (Shareware)

A replacement for Apple's Simple Player, this program does a number of tricks to make playing QuickTime movies as fast and smooth as possible. It automatically sets the pixel depth to the best setting, hides the scroll bar on the bottom, and does other nifty things. Optimized for either the 680x0 Macs or the PowerPC, this is a major improvement over most other players, especially on the older Macs.

Peter Lee, 39 Canton Ave., Amherst, MA, 01002-1803, , .
lee@cs.umass.edu



Adobe Premiere 4.2.1

\$490

Powerful digital video software with intuitive user interface displays. Tracks in "filmstrip" style, allowing users to see all the details in clips. Animated icons simplify selection of digital effects including wipes, fades, dissolves, zooms, and page turns. Adobe Photoshop-compatible filters can be applied across video segments to achieve special effects and image control. You can superimpose titles, graphics, and even other video images to create dramatic effects. Comes standard with a CD-ROM containing tutorials, clip media, and documentation.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-642-3623.
http://www.adobe.com



After Effects 3.1

\$650

Superb digital post-production tool for multimedia, even broadcast video. You can engage in precise motion control, time remapping and batch rendering, plus multiple effects per layer. The result is smooth motion graphics, eye-catching special effects and supe-

rior composites. As an Adobe product it works well with Photoshop, Premier and Illustrator. Very powerful.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-685-3504.
<http://www.adobe.com>

FINANCES



Quicken Deluxe 7.0 CD-ROM **Quicken 7.0**

\$50
\$35

For personal financial record keeping that you can't quite get yourself to do on paper, the "regular" version of Quicken offers an option. It is fast and offers beautiful color graphics, improved tax stuff, loan amortization, and more. It can auto-enter repeating and automatic payments. You can zoom in to detail reports and actual transactions. Online banking and investment tracking capabilities. The biggest changes for version 7 are interface refinements, better online help, and a printed manual. Investment tracking and organization are stronger too. The Quicken Deluxe CD-ROM does have a few new features like a retirement planning module and impressive financial planning worksheets. Deluxe is also much better integrated than the previous version. Nevertheless unless you need its special additional features, the basic version is the best choice.

Intuit Inc., 2650 East Elvira Rd. #100, Tucson, AR, 85706-7123, 415-322-0573, 800-446-8848.
<http://careermosaic.com/cm/intuit/intuit1.html>



MacInTax

\$40

Nobody likes to do taxes, even on a Mac. But tax software can make the process a bit less painful. If you itemize deductions or use schedules C, D, or E, it's a lot easier to do your taxes with a computer program than to fill out the forms by hand. The trouble is, there are such time pressures to get tax programs to market that bugs and problems always pop up. MacInTax is one of the easier tax programs to use, and it includes the option of electronic filing for those who want a fast refund (the IRS charges a premium for this). There are additional packages for state returns and a professional series, but bugs extend to these as well, and the state packages often have woeful interfaces. It is essential that if you use one of these programs, you must keep yourself informed of bug fixes and problems, by calling Intuit regularly during tax season if necessary. The guided tour of your taxes is well laid out and helpful, but preparing taxes, even with MacInTax, is not for the novice. If you have any doubts, contact a professional.

Intuit Inc., 2650 East Elvira Rd. #100, Tucson, AR, 85706-7123, 415-322-0573, 800-446-8848.
<http://careermosaic.com/cm/intuit/intuit1.html>



M.Y.O.B. Small Business Accounting 7.0 **M.Y.O.B. Small Business Accounting 7.0 with Payroll**

\$77
\$135

This is a very innovative package, great for those who want to computerize the books for their small business, but who don't know much about accounting. First-rate manuals, navigation screens, CD-ROM help and a video all help you get started. It's a big help as some of the MYOB interface isn't very Mac-like. Screens can be customized to look like their paper equivalents (e.g. invoices, purchase orders, or checks). It is a full featured accounting program with general ledger, check writing, inventory management and more. You can track the progress of any job and generate fully customizable reports. It can even dial the phone, and link notes to a calendar and to do list. This single user program is perfect for a sole proprietor or small business owner. The new version adds a Quicken import feature.

BestWare, 300 Roundhill Dr., Rockaway, NJ, 07866, 201-586-2200, 800-322-6962.
<http://bestware.com>



MultiLedger 5.0 **CheckMark Payroll 5.6**

\$120
\$100

Every accountant who has seen this package likes it for its simplicity and direct approach. Modules include accounts payable, accounts receivable, general ledger, and inventory. It has full import and export capabilities and you have great flexibility in preparing and formatting reports. It is also multi-user supporting up to 10 users. It is PowerPC native and the payroll module have everything you are likely to need to calculate everything from payroll deductions to 401(k) accounts. Great program for the small- and medium-sized business owners for whom accounting terms are not a foreign language. It supports multiple users, and even works on older Macs. It's modest memory and disk requirements really set it apart from the competition.

CheckMark Software Inc., 724 Whalers Way, Bldg. H, Fort Collins, CO, 80525, 970-225-0522, 800-444-9922.
<http://www.checkmark.com>

FONTS



Adobe Typeface Library

Prices vary

From the creators of PostScript, Adobe's fonts are the most professionally hinted and exact to the designer's specifications. Whether your output is created on a StyleWriter using ATM or on a high-end Linotronic, Adobe fonts will always look their best. Adobe's MultipleMaster font technology with flexible weights and widths is the wave of the future, and used throughout all BMUG publications.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-445-8787.
<http://www.adobe.com>



The BMUG Font Collection & Desktop Publisher's Toolkit

\$25

BMUG has collected over 1,700 PostScript and TrueType fonts all in one place. This collection includes the contents of the entire BMUG Font Library! Many are as good as the fonts from Adobe. This CD-ROM also includes tons of Shareware publishing tools every Mac user shouldn't be without. There is no better product for exploring font options on a Mac while keeping your pocketbook intact.

BMUG, Inc., 1442A Walnut St., #62, Berkeley, CA, 94709-1496, 510-549-2684, 800-776-2684.
<http://www.bmug.org>



Foreign Language Laser Fonts

Prices vary

The best foreign-language LaserWriter fonts around. They have PostScript Type 1 and TrueType fonts for most alphabets, including the hard ones like Hebrew and those from East Asia.

Ecological Linguistics, PO Box 15156, Washington, DC, 20003-5156, 202-547-7678, .
ecoling@aol.com

Publishing Accessories



PopChar Lite 2.7.2

Postcardware (Free)

PopChar is a control panel that with the touch of a menu bar icon generates a window displaying every possible character (or set of characters) available in the current font. Insert the character into your document by simply clicking on the character in the PopChar window. It even displays the keyboard combination used to generate that character, if you want to memorize it. One of the best Mac font utilities, and it's free! Available on BMUG's Text C1 disk for \$4, or on the BMUG Font Collection and Desktop Publisher's Toolkit CD-ROM. But as you might guess from the "lite" in the name of the newest version, PopChar is going commercial. Thank you Günther Blaschek for the many years of wonderful Freeware.

Günther Blaschek, Petzoldstr. 31, A-4020 Linz, Austria, . . .
gue@soft.uni-linz.ac.at



Adobe Type Manager 3.9

free

ATM renders PostScript fonts for any QuickDraw device (the screen, StyleWriters, etc.). It is a requirement for any sort of page layout, newsletter creation, or sign-making—just about anything that requires text at uncommon sizes. It takes a bit of RAM, but is worth it for the beautiful way it displays fonts. Version 3.8.3 is available free as part of Adobe Acrobat Reader 2.1, which is downloadable from the BMUG BBSes; it is also available on the new BMUG Font ROM. ATM is now Power Mac native and can even render KanjiTalk PostScript fonts. Version 4.0 Deluxe is due soon with much greater functionality. The copy of version 4.0 included with Acrobat Reader 3.0 is not a final version and is a bit conflict prone.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-822-4451.
<http://www.adobe.com>



MasterJuggler Pro 2.0

\$50

If you deal with lots of fonts, you need a font manager. Many thought System 7.1's Fonts folder would do it in, but if you have more than a couple dozen fonts, you will quickly reach System 7's practical limits. When you do, check out MasterJuggler Pro. Like the competition, MasterJuggler supports drag-and-drop. But it does more, like checking for resource conflicts on the fly, checking for corruption on the fly, saving copies of fonts used just in your document for taking them to a service bureau. Its compression algorithm for fonts and sounds is better. It tells you when you're missing printer fonts before you print. In short, it takes care of all the hidden details and then keeps you from making mistakes. Perhaps its biggest drawback is a quirky interface. Unlike the competition, MasterJuggler has been regularly improved and refined to support the evolving Mac OS.



Alsoft, Inc., 22557 Aldine Westfield, Spring, TX, 77373, 713-353-4090, .

Now WYSIWIG Menus (Part of NOW Utilities 6.5.3)

\$85

Far and away the most conflict-free Font menu modifier for showing you what your fonts look like when you need to know—when you're choosing them from the Fonts menu. Unifies font families and works in most programs. Customizable to prevent problems with programs that don't like it.

Now Software, Inc., 921 SW Washington St. #500, Portland, OR, 97205, 503-274-2800, 800-275-1669.
<http://www.nowsoft.com>

GAMES

Arcade



Maelstrom 1.4.3

\$15 (Shareware)

Highly addictive and a whole lot of fun, this is one of those rare, really amazing hit Shareware games. Requires 256 colors. It's a cross between Asteroids and a half-dozen other games, including largely Lunatic Fringe (from the More After Dark module set). Very entertaining sound effects. As with many Ambrosia products, the game is a bit jittery on 603e PowerMacs that don't have a Level-2 cache card installed.

Ambrosia, PO Box 23140, Rochester, NY, 14692-3140, 716 427-2577, 800-231-1816.
<http://www.ambrosiasw.com>



Loony Labyrinth 1.02

\$35

The authors of Tristan and Eight Ball Deluxe keep outdoing themselves! They have, once again, created the ultimate in computer pin-ball. Multi-level and multi-ball play based on a "loony" theme. Cool sounds and totally addicting. You have to see it to believe it.

StarPlay Productions, Inc. (by LittleWing Co.), PO Box 217, Greeley, CO, 80632-0217, , 800-203-2503.
<http://www.starplay.com>



Prince of Persia CD Collection

\$18

The Shadow and the Flame is much more elaborate than the first highly-acclaimed Prince of Persia, the stunning full-color graphics, a more involved story line, and lots of new tricks to learn, make this a fabulous sequel. The smooth animation with hair-raising sword fighting make this action-adventure a Mac classic. Incredibly the Collection includes both the original and the sequel on CD for less than either on disk.

Brøderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.
<http://www.broderbund.com>



William's Digital Arcade: Joust

\$27

William's Digital Arcade is an emulator that translates the original game code from Williams Entertainment's classic arcade game Joust—which means that what you get on your Mac screen is exactly what you used to get for a quarter at the local video arcade. Fun!

Digital Eclipse, 5515 Doyle St., #1, Emeryville, CA, 94608, 510 450-1740, .
<http://www.digitaleclipse.com>



PegLeg

\$35

An outstanding full-color mixture of a shoot 'em up and Asteroids, with all kinds of surprising animated obstacles. Lots of levels and cool graphics. It's great for anyone with a color monitor. Fat binary for Power Macs and 680x0 processors, and will fill even the largest of screens. If you like shoot 'em ups, don't miss this one!

Changeling Software, 596 Elm St., Windsor Locks, CT, 06096-1603, 203-292-5087, 800-769-2768.
<http://www.changeling.com>



Apeiron 1.0.2

\$15 (Shareware)

If you like Maelstrom you are going to love Apeiron. This is the latest contribution from Ambrosia's resident Mac wizard, Andrew Welch, to Ambrosia's growing entertainment collection. Apeiron is Ambrosia's interpretation of Atari's Centipede, cranked up a notch for the nineties. The game revolves around battling a horde of insects in a mushroom patch. A really great game for the young and the young at heart. As with many Ambrosia products, the game is a bit jittery on 603e PowerMacs that don't have a Level-2 cache card installed.

Ambrosia Software, PO Box 23140, Rochester, NY, 14692-3140, 716 427-2577, 800-231-1816.
<http://www.ambrosiasw.com>



Swoop 1.0.2

\$15 (Shareware)

Developed by David Wareing, of Adelaide, Australia, Swoop is an arcade classic combining pulse-quickenning game play with state of the art computer animation and audio effects. Swoop strikes close to Space Invaders in terms of game play. Smooth flowing action, detailed full color graphics, and custom sound effects all provide for an exciting game. The only thing missing is the cash box in which to pump your coins. As with many Ambrosia products, the game is a bit jittery on 603e PowerMacs that don't have a Level-2 cache card installed.

Ambrosia Software, PO Box 23140, Rochester, NY, 14692-3140, 716 427-2577, 800-231-1816.
<http://www.ambrosiasw.com>



Crystal Caliburn

\$35

Another super pinball game from StarPlay, this time with a King Arthur theme. If you like these games, consider getting Crystal Caliburn and Loony Labyrinth as part of a \$50 bundle and save.

StarPlay Productions, Inc. (by LittleWing Co.), PO Box 217, Greeley, CO, 80632-0217, , 800-203-2503.
<http://www.starplay.com>



Escape Velocity

Shareware

One of the hottest new internet games, Escape Velocity. It places you in a gigantic non-linear universe in the year 2246. Where do you go in your new space vessel? Face off with pirates, wheel and deal at some outpost, get stuck in a civil war? Maybe there will be something entirely new because Escape Velocity supports independent plug ins to increase the number of options and scenarios. Matt Burch has done a nice job.

Ambrosia Software, PO Box 23140, Rochester, NY, 14692-3140, 716 427-2577, 800-231-1816.
<http://www.ambrosiasw.com>

Cards and Puzzles



Shanghai II 1.05

\$20

A long-time favorite of BMUGers near and far. Played with digital Mah Jong tiles, it's a very soothing game. Shanghai II is a full-color update to the original. The game offers a variety of tile faces, different layouts to solve, and an editor to create your own layouts. Avoid Shanghai: Great Moments which actually offers less for more. A missed opportunity.

Activision, 11601 Wilshire Blvd. #10, Los Angeles, CA, 90025, 310-473-9200, .
<http://www.activision.com>



Power Poker

\$40

A computer program for poker players and a lot more. The computer-generated players learn from their mistakes and sooner or later play a very good game of poker. The program can also generate great QuickTime movies of the computer-generated players. Up to ten people (humans) can also play when connected via AppleTalk or Ethernet.

Electronic Arts, 1450 Fashion Island Blvd./PO Box 7530, San Mateo, CA, 94403, 415-571-7171, 800-245-4525.
<http://www.ea.com>



Eric's Ultimate Solitaire

\$30

From the author of the popular Shareware Klondike and Forty Thieves comes this truly "ultimate" set of solitaire card games. Full color, clean sounds, and great card-shuffling and card-throwing animation make for a new kind of addiction. Includes features for PowerBook users and is light on your hard drive and RAM.

Delta Tao Software, Inc., 760 Harvard Ave., Sunnyvale, CA, 94087, 408-730-9336, 800-827-9316.
<http://www.deltatao.com/deltatao>



Triazzle Living Puzzle (CD or Disk)

\$20

Berkeley Systems has applied its wacky graphics expertise to an electronic puzzle and has come up successful. Triazzle is cool. It is packed with the sights and sounds of the rain forest. Fitting puzzle pieces together to form an animal causes the animal to come to life with authentic movement and sound. More than just a game, Triazzle also provides information on the animals found in the rain forest game. What's more, Berkeley Systems donates a small percentage of the profits from Triazzle to the Rain forest Alliance, an organization that seeks creative ways to protect this important natural resource. This lets you buy a fantastic game while doing something nice for the environment.

Berkeley Systems, Inc., 2095 Rose St., Berkeley, CA, 94709, 510-540-5535, .
<http://www.berksys.com>

Cards & Puzzles



Gryphon Bricks

\$30

Use Lego-style bricks to build an incredible variety of buildings and structures. View your masterpiece from any angle and pick brick colors as well. Best of all, you never get to the bottom of the box.

Gryphon Software Corporation, 7220 Trade Street, Suite 120, San Diego, CA, 92121-2325, 619-536-8815, 800-795-0981.
<http://www.gryphonsw.com>

Classic Macintosh



Super Tetris

\$35

Like the original Tetris game for the Mac, Super Tetris adds new twists to its addictive predecessor. You'll need to rethink your strategies to deal with a new goal, as well as bombs, bubble blocks, and lots more. Guaranteed to give you a whole new case of Carpal Tunnel Syndrome.

Spectrum Holobyte, 2490 Mariner Sq. Loop, Alameda, CA, 94501, 510-522-3584, 800-695-4263.
<http://www.holobyte.com>



Dark Castle 3.03

\$28

It's back, and it's in full color. Delta Tao has traded its high-end paint program Zeus to Silicon Beach (Aldus, Adobe, whoever...) for the rights to this classic Mac game. Was it worth it? You bet. This glorious color version will run on all current (color) Macs, and you won't be able to wait for the sequels. It's surprising how well this game still stands up against the modern Mac action games.

Delta Tao Software, Inc., 760 Harvard Ave., Sunnyvale, CA, 94087, 408-730-9336, 800-827-9316.
<http://www.deltatao.com/deltatao>

First Person



Bolo

\$25 (Shareware)

Bolo is the best network strategy tank game. It supports up to 16 network players at once! There's a map editor for creating or changing the landscapes in Bolo-land, and it even looks good in black & white. Check out the BMUG PD-ROM for a bunch of Bolo modules to add even more variety.

Stuart Cheshire, PO Box 8323, Stanford, CA, 94309-8323, .
cheshire@cs.stanford.edu



Marathon 2: Durandal

\$45

This first-person 3-D perspective game from the people that brought us Pathways into Darkness is a sophisticated shoot 'em up with strategies, puzzles, and incredible realtime rendered graphics. It's VR-compatible (if you have a virtual reality headset) and comes in Fat binary for Power Macs and 68K Macs. Great over a network with (or more like against) other humans. Be warned, it's pretty violent, but it has enough plot and strategy to win over the timid. The sequel begins where you left off in the original, as you are enslaved by a rogue computer, Durandal, and must comb the ruins on an ancient city while struggling to escape. If you are new to Marathon, consider buying the two programs as part of a \$60 bundle.

Bungie Software Products, 1935 So. Halsted St. Suite 204, Chicago, IL, 60608, 312 563-6200, .
<http://www.bungie.com>



Dark Forces (CD) 1.2

\$50

This brand new release from LucasArts raises the bar another notch on the first-person shooting games. With less emphasis on the shooting and more care taken on the creation of very large and complex levels, this game is like a whole world in itself. The levels are richly textured and the realtime-rendered environment is very realistic with flowing water and laser blasts that reflect off walls. We have also been very impressed by the Mac port—while this game obviously started in the PC world of low-res, the Mac version is sharp and Power Mac native. Dark forces is sure to keep you completely entertained for many days or weeks.

LucasArts Entertainment, PO Box 10307, San Rafael, CA, 94912, 415-721-3300, 800-782-7927.
<http://www.lucasarts.com>



Realmz 3.0.2

\$30 (Shareware)

Inspired by Dungeons and Dragons, this loosely structured game allows the player to explore various scenarios with your customized fellow adventurers. You have the freedom to go wherever and whenever you want giving the game great variety and individuality. Even your fellow computer adventurers change as the game advances from one level to another. Regularly updated with new scenarios, this nifty shareware game is worth checking out. It does require a fast Mac.

Fantasoft, Inc., PO Box 14261, Madison, WI, 53714-0261, 608-249-5418, .
<http://www.fantasoft.com>



Descent Descent II

**\$50
\$50**

Enter the world of mine shafts and never ending tunnels. The visual effect can be pretty realistic, and unnerving. Menacing robots are all around, above and below you. Sound effects and music are great atmosphere enhancers. Super 3D game. There is a Descent Levels of the World CD and Descent II is scheduled for release shortly. How low can you go?? Don't forget one thing. You need a fast PowerPC Mac to enjoy the speed and thrills of Descent. Descent II adds a number of new turns and twists and some new heavy fire power weapons to the nausea inducing mix. Belt up!

MacPlay, 17922 Fitch Ave., Irvine, CA, 92714-6038, , 800-428-8200.
<http://www.macplay.com>



Absolute Zero

\$45

Go down into a 24th century mining world and play different characters battling against a reawakened race of aliens (yes, you woke them up). Nice vehicles and weapons, and a helmet that makes your vehicle transparent. Very tough challenge. Get the update as the first 2 levels are a bit easier.

Domark Software, , , , 415-513-8929, 800-695-4263.
<http://www.domark.com>



Havoc

Shoot 'em up in the great outdoors while you ride hovercraft, cycle or tank. Can be played over a network, so be careful when you bend down to pick up that shield. You might loose your vehicle or worse. Requires PowerPC Mac.

Reality Bytes, , , , 617-621-2550, .
<http://www.realbytes.com>



System Shock

\$40

Tired of being chased by bad guys? Become one. In System Shock you are the bad 'ol cyberthief. After an involuntary brain implant you set out to destroy the artificial intelligence center that makes you life no fun at all. A lot of mental exercises and plot twists, but not a lot of gore. Requires a lot of processor muscle (PowerPC 7100/80 with Level 2 Cache; 16 MB RAM or greater to play).

Origin Systems, , , , 512-434-4263, .
<http://www.ea.com/origin.html>

Flight Simulators



HellCats 1.04 HellCats: Missions at Leyte Gulf 1.02

\$39

\$21

Hellcats' six different missions and impressive graphics will keep you entertained. Some think the sequel is even better. These WWII simulators are beautifully smooth on any size screen, and easy to control.

Graphic Simulations, 1200 East Collins #214, Richardson, TX, 75081, 214-699-7400, .



F/A-18 Hornet 2.01

\$49

Incredible flight simulator. Modern-day jet fighter with advanced missiles, radar, and electro-optical weapons. There are even joystick/throttle sets available for more realistic flight control, and it's fully networkable for group combat missions. Version 2.0 is Power Mac native with more detail and silky-smooth animation.

Graphic Simulations, 1200 East Collins #214, Richardson, TX, 75081, 214-699-7400, .



A-10 Attack 1.1 A-10 Attack Cuba

\$50

From the original creator of Hellcats comes a more versatile aircraft simulator that promises to be more enjoyable for longer games. While it doesn't have the graphic detail of F/A-18 Hornet the "Wart Hog" is a more maneuverable aircraft. The missions in the game are more detailed and include a strategic aspect as you defend territory and plan campaigns. Additional aircraft and campaign modules are available and A-10 Cuba shifts the scene to Guantanamo Bay. Runs well on lower processor-based Macs.

ParSoft, 101 West Runner Road, Suite 430, Richardson, TX, 75082, 214-479-1340, .
AOL PARSOFT



X-Wing Collector's CD

\$37

Over one hundred awesome missions against demanding adversaries in rendered beautifully settings makes this a great choice on a PowerPC. The next generation of flight simulators.

Lucas Arts, P.O. Box 10307, San Rafael, CA, 94912, 415-472-3400, 800-985-8227.
<http://www.lucasarts.com>



Comanche Mac

\$45

Tires of all those fixed wing simulators? Check out Comanche Mac, the attack chopper. Over one hundred missions, including 10 that are basically training flights. Nice special weather effects, and you fly anywhere on earth. Runs on anything as fast as an 030 Mac.

NovaLogic, , , , 818-880-1997, 800-858-1322.
<http://www.novalogic.com>

Miscellaneous Games



SimCity 2000 CD Collection 1.2 SimCity 2000 (Disk) 1.2

\$57

\$40

Get the entire collection of scenarios and the urban renewal kit on a single CD-ROM. You can design your own buildings and print out your custom landscapes, or choose from among the over 100 new structures. It's still 3-D and in color, plus it's accelerated for the PowerMac.

Maxis, 2 Theatre Square, Orinda, CA, 94563, 510-254-9700, 800-336-2947.
<http://www.maxis.com>



Myst (CD)

\$45

First there was SpaceShip Warlock—fun to look at, but not much of a game. Then came the JourneyMan Project—better to look at, and good because you did a lot of looking and not much doing.

Now there's Myst. Glorious to behold, fast enough to actually play, and, to top it all off, a great game. It's mysterious, intriguing, puzzling, haunting, and creative. Highly recommended.

Brøderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.
<http://www.broderbund.com>



You Don't Know Jack XXL

\$35

Even more irreverent, bizarre, sarcastic: It's a quiz show on CD-ROM. Challenging classic trivia mixed with pop culture, sound effects and an irreverent host. Great for parties if you don't all mind pressing around a single screen. If you exhaust the questions or want more, check out the separate "X-tra Large" and "Question Pack" so you can play "Don't Be a Wimp" and "Screw Your Neighbor" to your little heart's content. It may even become a TV show! Many different packages available including Sports.

Berkeley Systems, 2095 Rose Street, Berkeley, CA, 94709, 510-540-5535, .
<http://www.berksys.com>



Reelect JFK

\$35

A clever bit of "what if?" history lets you sit in the oval office and plan through the events of 1963 and 1964 as if JFK never went to Texas. How would you deal with the civil rights movement, the Communist menace, Barry Goldwater or Chet Huntley and David Brinkley? It's a fun way to see if you do know Jack.

Quadra Interactive, 701 Palomar Airport Road, 3d Floor, Carlsbad, CA, 92009, 619-931-4755, .



Full Throttle

\$25

For the motorcycle lover in you. Save America's last motorcycle factory while you negotiate your way through an apocalyptic "mad maxish" environment. Murder, mayhem and burnt rubber, all in full motion video.

Lucas Arts, P.O. Box 10307, San Rafael, CA, 94912, 415-472-3400, 800-985-8227.
<http://www.lucasarts.com>

GENERAL UTILITIES

Compression



StuffIt Deluxe 4

\$75

Lets face it, StuffIt is the most stable of the current compression programs and the standard on most BBSes and Macs. It easily decompresses a wide variety of compressed file types, including those from PCs. The latest version supports drag and drop segmenting for easier archiving and boasts speed improvements. But use the new finder integration feature with caution, it takes 1 Meg of RAM! There are also some compatibility problems with the SpaceSaver element. If you order direct from Aladdin ask about a users group discount. Check out various vendor bundles for big discounts.

Aladdin Systems, Inc., 165 Westridge Dr., Watsonville, CA, 95076, 408-761-6200, 800-732-8881.
<http://www.aladdinsys.com>



StuffIt Expander 4.0.1 DropStuff 4

**Freeware
\$30 (Shareware)**

StuffIt Expander is a "must have" utility. Expander gives you drag-and-drop expansion of compressed Stuffit files, Compact Pro files, and a number of others. State-of-the-art Shareware and another excellent product from Aladdin. Essential for anyone getting new files from other places. The counterpart is DropStuff, for drag and drop compression albeit with fewer options than the full StuffIt Deluxe package.

Aladdin Systems, Inc., 165 Westridge Dr., Watsonville, CA, 95076, 408-761-6200, 800-732-8881.
<http://www.aladdinsys.com>

Disk Imaging



ShrinkWrap 2.1

Freeware

ShrinkWrap is a Freeware utility made to manage disk images. It incorporates the functionality of DiskCopy and MountImage into one easy-to-use application, then improves on these products by adding on-the-fly compression/decompression with the StuffIt Engine, implementing drag and drop and AppleScript support, and supporting almost all known image file formats. Using ShrinkWrap is a breeze, making it an all around great utility. This is the last freeware version of ShrinkWrap. Future development will be through Aladdin Systems, the StuffIt folks.

Chad Magendanz, 15220-263rd Avenue SE, Issaquah, WA, . . .
chad@halcyon.com

Extension Mangers



Conflict Catcher 3.0.4

\$65

An excellent program for managing your extensions and control panels and pinpointing incompatibilities. With features and ease of use, this new version blows away the rest of the extensions manager market. It still automatically tests for problems; it also lets you define specific, easy-to-select customized sets and lets you control the order in which they load. Now Utilities' Startup Manager also performs well, but is just not as versatile or powerful as Conflict Catcher.

Casady & Greene, Inc., 22734 Portola Dr., Salinas, CA, 93908-1119, 408-484-9228, 800-359-4920.
<http://www.casadyg.com>

Finder Utilities



FindPro III v1.1.1

ZiffWare (Free)

If you haven't upgraded to System 7.5, this utility, written by Bill Monk and available only from Ziff-Davis, is the best find/search utility available. This control panel intercepts Command-F, bypasses the Finder's Find command, and provides you with a robust file finder that can search by multiple criteria. This may be reason enough to subscribe to ZiffNet Mac. A simplified version of FindPro comes with System 7.5. It has fewer features but also has a much less cluttered interface.

Ziff-Davis Publishing Co. (Bill Monk), 50 Beale St, San Francisco, CA, 94105, 415-547-8300, .
<http://zdnet.com>



Retrieve It 2.5

\$65

A powerful, affordable utility that searches for any specified text string by single word, phrase or logical operation. It will even check file servers and CD-ROMs, and you don't have to open the application used to create the file. It works over LANs and the web, where its searches run rings around those the browsers perform. It can effectively access the major web search services like Yahoo as well. A real time saver.

MVP Solutions, P.O. Box 533, Mountain View, CA, 94042-0533, 415-562-3457, .
<http://mvpsolutions.com>

Menu Enhancers



Now Menus (part of NOW Utilities 6.5.3)

\$70

This latest version really makes the idea of customizing your menus a dazzling concept. Not only can you customize the Apple menu and change the font used in all your menus as in previous versions, but now you can create an unlimited array of menus for whatever you can imagine—in whatever programs you want them—and with whatever you want in them. You can even put icons in the menu bar and attach SuperBoomerang lists to it. Surprisingly compatible with just about everything, you won't be able to live without this once you start using it. Part of the Now Utilities 6.5 package.

Now Software, Inc., 921 SW Washington St. #500, Portland, OR, 97205, 503-274-2800, 800-275-1669.
<http://www.nowsoft.com>



Now SuperBoomerang (part of NOW Utilities 6.5.3)

\$70

Get menus of recently opened folders and files with SuperBoomerang. This latest version integrates well with another NowUtilities module (NowMenus) to provide extensive flexibility in accessing the contents of your disks. It can be a bit finicky, so keep it updated as conflicts can arise. Regrettably the module, like much of Now Utilities, is looking a bit less Mac-like. Part of the Now Utilities 6.5 package.

Now Software, Inc., 921 SW Washington St. #500, Portland, OR, 97205, 503-274-2800, 800-275-1669.
<http://www.nowsoft.com>



DragThing 1.6

Freeware

Tidy up those pesky desktop icons. Just drag an app, file, folder, disk, etc., onto an empty square in the DragThing dock. A double-click launches or opens the docked item, or drag a document onto a docked app to open it. What could be simpler?

James Thomson,
<http://www.cts.gla.ac.uk/~james/>

PowerBook Utilities



EMMpathy 2.1

\$30

Everything you need to aid in battery management of 500-series PowerBooks, excluding those with PowerPC upgrades.

VST Power Systems, 125 Nagog Park, Acton, MA, 01720, 508-263-9700, .
<http://www.vsttech.com>



PB Tools 2.0

\$60

Light on Features but very stable, this is the best utility for battery management with older PowerBooks, but does not work on upgraded 500-series PowerBooks. This product has been discontinued but may still be available.

VST Power Systems, 125 Nagog Park, Acton, MA, 01720, 508-263-9700, .

RAM Enhancers



RAM Doubler 2.0.1

\$55

This product came out of the blue at the January '94 San Francisco Macworld Expo to help millions of Mac owners get by with the expensive RAM on hand. Now with this latest upgrade, it could be nicknamed "RAM Trippler." It now tripples the amount of RAM in your machine. It works with most programs and only slows your Mac down a bit. It works best if you use a number of smaller applications. If you need extra RAM for memory-hungry programs like Photoshop, RAM Doubler won't help. Be sure to get the most recent version as changes in the MacOS can cause problems. A minimum of 8 Megs of real RAM is required. It's not as good as the real thing, which is currently very cheap, but it's close. Current users can upgrade for \$30.

Connectix Corp., 2655 Campus Dr., San Mateo, CA, 94403, 415-571-5100, 800-950-5880.
<http://www.connectix.com>

Resource Enhancers



FontFaker71 1.0

\$4 (Shareware)

The System 7.1 Fonts folder was a nice advance for the Mac OS. Font resources are readily available to any app you are using. But ever want sounds, PICTs or FKeys just as easily usable? FontFaker does it. Just drag the resource onto FontFaker and its file type is changed to allow its access just like a font. Undo the change just as easily.

Lawrence Harris, 29-J Laurel Ridge Apts., Chapel Hill, NC, 27516, . .

Universal File Viewer



CanOpener 3.5

\$65

CanOpener is an excellent utility for opening any corrupted text, sound, or picture file. Sometimes it is the only thing that can help. You can open any file, even if it's corrupted, and cut and paste items directly out of the viewing window, unlike most of the recovery products out there. Version 3.5 allows you to view JPEG pictures, extract URLs and email addresses and get text from HTML files. Plus it's fast!

Abbott Systems, Inc., 62 Mountain Rd., Pleasantville, NY, 10570, 914-747-3116, 800-552-9157.
<http://www.abbottsys.com>

Virus Protection



Disinfectant 3.6

Freeware

The best virus detection and eradication utility you can get (and that includes commercial software!). Installs an extension that protects you from infection and works against all known viruses. Excellent online help and a new color icon. It works over networks, too! It does everything the commercial stuff does, and better—you won't even know it's there! Available on BMUG Utilities V1 disk, for \$4, on the BMUG PD-ROM, and online everywhere. Thank you, John Norstad!

John Norstad, , , , , .

GRAPHICS AND DRAWING



Adobe Illustrator 6.0

\$390

Adobe's PostScript illustration program continues to improve. Illustrator gives you the ability to edit and create objects "in-preview," organize objects into layers, and change paint attributes modelessly. Illustrator has always been precise at generating clean PostScript but in the past has had the least automated features, requiring users to create blends of objects to add simple gradient fills. With Version 6, Illustrator has added seamless integration with Photoshop and PageMaker (drag and drop), support for Photoshop filters, built-in color separation, path patterns for borders, frames, and other unique shapes, plus a rasterizing feature that converts any Illustrator image into pixel-based artwork which can be resized at any resolution. But in the area of image import, blends, traces, and especially text speed and handling, it is still a bit inefficient.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-649-3875.
<http://www.adobe.com>



ClarisDraw 1.0v3

\$200

ClarisDraw is the next generation of the MacDraw Pro drawing standard, incorporating more than 75 new features. New tools include regular color fills, gradients, beziers and shadows, full 24-bit color painting, image editing effects, presentation special effects, QuickTime video support and enhanced text handling with linked frames, text wrap and style, and built-in intelligence. SmartSymbol libraries and 3,400 pieces of clip art provide new drag-and-drop graphics creation and editing capabilities. Compatible with MacDraw II and MacDraw Pro files and data, as well as other industry-standard file formats (EPSF, TIFF, PICT, PICT2, CGM, MacPaint, and QuickTime). Seamless cross-platform (Mac and Windows) transparency across applications and platforms. Targeted for the business environment.

Claris Corp., 5201 Patrick Henry Dr., PO Box 58168, Santa Clara, CA, 95052-8168, 408-987-7000 (customer relations), 800-325-2747 (U.S. dealers).
<http://www.claris.com>



KPT Vector Effects

\$120

KPT Vector Effects is a powerful set of plug-in extensions for Adobe Illustrator and Macromedia FreeHand that enable you to create special effects like distortion, warping, 3D extrusion, bevel embossing, perspective distortion and shadowing that manually would have taken hours to create or simply would not have been possible. Similar to Kai's Photoshop filters, Vector Effects' interface is intuitive and easy to use.

MetaTools, 6303 Carpenteria Av, Carpenteria, CA, 93013, 805-566-6200, 800-472-9025.
<http://www.metatools.com>



FreeHand 7

\$390

FreeHand has undergone major improvements since being acquired by Macromedia. It has become a very flexible program that can be configured to fit your particular needs. Styles apply to graphic elements as well as text. Text handling is speedy and well implemented. Xtras (plug-ins) can filter or manipulate. Third party and Illustrator plug-ins are supported. So are Photoshop Plug-ins, although those supplied by Adobe may take a bit more effort. The latest revision revamps the interface with tabbed palettes and drag-and-drop with Photoshop and other programs. Production features are greatly improved, and there are major drawing enhancements. The biggest problem is very poor documentation.

Macromedia, 600 Townsend Street, San Francisco, CA, 94103, 415-252-2000, 800-326-2128.
<http://www.macromedia.com>



KPT Final Effects for Adobe After Effects KPT Final Effects AP for Adobe Premier

**\$515
\$135**

If you want high quality 3-D Video effects, check out Final Effects. It requires the use of Adobe After Effects, making it a very pricey investment. Yet the combination is elegant. The wide variety of filters are easily controlled. A more limited version for Premier still packs a lot of functionality for those on a budget.

MetaTools, 6303 Carpenteria Av, Carpenteria, CA, 93013, 805-566-6200, 800-472-9025.
<http://www.metatools.com>

HARDWARE UTILITIES



Disk First Aid 7.2

Appleware (free)

With version 7.2, Apple has performed a major overhaul of this tireless and free utility. It now gives you some idea of what it's actually doing while it hums along. An excellent alternative to any of the larger utilities for daily maintenance of your storage media. We consistently use it as the "last word" on the health of a drive's directory (don't forget to run it repeatedly until your drive gets a clean bill of health). If you don't have it with your system software, get the latest Hardware System Update from your Apple dealer.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://www.apple.com>



FWB Hard Disk ToolKit 2.0

\$120

For most people, the drive software that comes with your drive is all you'll need. Apple and APS regularly update their drivers so that your hard disk will continue to run smoothly, and those updates are free. But if you are a Mac technical wiz and want or need to tweak the innards of your device driver, consider the full version (not PE version) of FWB's HardDisk Toolkit. It is a good formatter for fixed, removable, or optical drives (check the list on the box or ask FWB to make sure the drive you'll be using with HDT is supported). It speeds up operations as well or better than any other third party driver software. The latest version is SCSI Manager 4.3-savvy. But remember: this product is not for the amateur. The Personal Edition offers little more than Freeware drivers, and you face expensive upgrades every time Apple tweaks the system software.

FWB, Inc., 185 Constitution Drive Ste A, Menlo Park, CA, 94025, 415-463-3500, .
<http://www.fwb.com>



MacTools Pro 4.0.4

\$95

All the major hardware utilities have been absorbed by Symantec, and apparently, the advertising bucks are going into other Symantec products. Symantec has chosen to discontinue the product in favor of Norton Utilities, although MacTools Pro is still available. Nevertheless, some differences between products remain. MacTools Pro has a clean interface and a strong selection of tools that seem to give it the upper hand in problem-fixing accuracy and disk recovery success. One nice feature, the RAM Disk, performs fixes for your system disk without shutting down and inserting a startup disk. Alas, RAM Disk does not work on some of the newer Macs. When we need to pull out the big guns on the Helpline, we reach for MacTools. But be warned, if you need technical support, it will cost you \$25 and up for help from Symantec.

Symantec Corp., 15220 NW Greenbriar Pkwy, Beaverton, OR, 97006, 503-614-7993, 800-441-7234.
<http://www.symantec.com>



TechTool Pro TechTool 1.1.2

**\$100
freeware**

Hardware testing programs have come and gone. The latest entry is TechTool Pro. It builds on the popular freeware program TechTool which does desktop rebuilds, zaps PRAM, displays system information and tests for damaged system files. The commercial "Pro" version adds hundreds of hardware and software tests super 3-D graphics and interactive problem solving dialog boxes. If you are responsible for keeping a number of Macs up and running TechTool Pro is worth the investment.

MicroMat Computer Systems, , , , 415-898-6227, 800-829-6227.

<http://micromat.com/mmcs>

IMAGE PROCESSING



Adobe Photoshop 4.0

\$550

Photoshop has long been the image editing program of choice for serious tweekers. Full featured and replete with hardware add-ons and software plug-in modules, it works well with a variety of readily accessed devices and programs. There are palettes for channel control, path creation, and on-the-fly color selection, plus layering and color correction tools. But it's RAM-hungry and a disk space hog, and take time to learn. Version 4 speeds things up a bit and is somewhat easier to use. But the version 4 interface redesign will require time to learn. The new Navigator palette will provide flexible panning and zooming while batch processing can be animated using the Actions palette. Layering for color adjustments is new and distortions improved. There is even simple Web support. But it still lacks adequate color separation tools, and multiple undos.

Adobe Systems, Inc. 2,345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-492-3623.

<http://www.adobe.com>



GraphicConverter 2.6

\$35 (Shareware)

GraphicConverter is a Shareware application that can open and read most common Mac, ATARI, Amiga and IBM formats to Mac formats and convert them from one format and back again as desired. It supports printing on almost any Macintosh printer. You can use GraphicConverter to convert files you find online for use in other programs, to view files, or to print them out. A versatile utility for viewing graphics from almost any source.

Lemke Software, Instenburger Str. 6, , 31228, Peine, , .

100102.1304@compuserve.com



DeBabelizer Toolbox 1.6.5 DeBabelizer Lite 1.1

**\$260
\$70**

The Toolbox offers image processing and translation for dozens of graphic and animation formats and platforms. Images can be automatically processed using internal scripting. In addition to editing and manipulation palettes the Toolbox supports a variety of plug-ins. The Lite version offers robust translation for bit-mapped, scanned and paint files but without the scripting, palette manipulation and image processing features. Both versions handle 24-bit and 8-bit color reduction.

Equilibrium Technologies, Thre Harbor Drive, Suite 111, Sausalito, CA, 94965, 415-332-4343, 800-524-8651.

<http://www.equil.com>



Color It! 3.2

\$100

A poor-folks' Photoshop, Color It! offers a lot of power for a very low price. You can do all the standard imaging editing stuff, work with plug-ins, and apply special effects. It is customizable and flexible, and yet sophisticated as it provides complete pressure control and an excellent Unsharp Mask filter, for example. Convolutions functions are powerful, presets are accessible. It doesn't have the power of Photoshop, but for beginners and even intermediate users, this cheap paint program fits the bill, and doesn't require mountains of memory or endless expanses of disk space.

MicroFrontier, Inc., PO Box 71190, Des Moines, IA, 50325, 515-270-8109, 800-949-5555.

<http://www.microfrontier.com>



JPEGView 3.3.1

Postcardware

Useful and stable, this well designed image viewer is not only good for JPEG-compressed images but for a variety of formats. Nice interface and extensive online help make this a good viewer choice on any Mac.

Aaron Giles, 182 E.95th Street 11E, New York, NY, 10128, , .

giles@med.cornell.edu



GifBuilder 0.4.1

Freeware

Don't stop with a static GIF image. With GIF Builder you can create animated GIF files, scripting the process if you like. Input anything from existing animated GIF's, a series of PICT's, TIFF files, QuickTime movies and more to create your images. You can control a number of image factors including pixel depth, color, interlacing, dithering, etc. Very nice.

Yves Piquet, Av. de la Chablière 35,1004 Lausanne, Switz., , .
piquet@ia.epfl.ch



Kai's Power GOO

\$50

Ever wondered how to make that picture of Uncle Fred look really "special?" Try Power GOO. Load the image and twist and stretch and brush until he looks just right. Lot's of fun for not much money. Hey, it can even be practical!

MetaTools,6303 Carpenteria Av, Carpenteria,CA,93013,805-566-6200,800-472-9025.
<http://www.netatools.com>

INTEGRATED



ClarisWorks 4.0v4

\$120

Version 4.0 of this great "works" program adds a bunch and puts it even further in front of the rest of the pack. While most integrated software packages have many separate modules interacting at minimal levels, ClarisWorks allows you to have a fully functional spreadsheet in your graphics document or word processor, or whatever. The word processing and spreadsheet modules are great for everyday use and will easily meet the needs of the basic and intermediate user. Amazingly, with all this power, ClarisWorks works just fine with less than 1 meg of RAM,making it perfect for PowerBooks. With the (included) Claris translators, you can also access documents made by most of the popular applications on the market. Competitive upgrades are \$70.

Claris Corp.,5201 Patrick Henry Dr.,PO Box 58168, Santa Clara,CA,95052-8168,408-987-7000 (customer relations),800-325-2747 (U.S. dealers).
<http://www.daris.com>

LEARNING AND EXPLORATION FOR KIDS

Early Elementary



Arthur's Teacher Trouble; Arthur's Birthday Just Grandma & Me; Harry & the Haunted House

\$36
\$36

These interactive selections from Living Books (Brøderbund/Random House)use original stories that children can hear and read aloud. Click on objects for animation, music and speech. Arthur's Teacher Trouble and Arthur's Birthday are geared to kids from ages 6 to 10 (and some adults). Just Grandma & Me and Harry and the Haunted House are for a slightly younger group (ages 3-8). Each program is bilingual(Spanish and English), so it can help kids get started in learning a second language. Just Grandma & Me is also in Japanese. Other good choices in the Living Books line include Sheila Rae the Brave and Ruff's Bone. (CD-ROM)

Brøderbund-Random House (Living Books),500 Redwood Blvd.,PO Box 6125, Novato,CA,94948-6125, , 800-776-4724.
<http://www.broderbund.com>



Putt Putt series Freddi Fish series

\$37
\$40

The Putt Putt series, geared to children ages 3 to 8, follow Putt Putt in his adventures whether finding baby animals at the Zoo to marching in a parade. A variety of games and levels of difficulty keep children engaged. The Putt-Putt and Fatty Bear's Activity is especially strong. The new Freddi Fish programs introduce a whole new set of games and learning tools for kids to see under the sea. Save money and check out the Humongous Classics Bundle featuring Putt Putt and other characters. (CD-ROM)

Humongous Entertainment

, 16932 Woodinville-Redmond Rd. #104, Woodinville, WA,98072,206-486-9258, .
support@humongouscom



Big Job

\$50

Great fun for kids who like machines. They visit a fire rescue, a farm and a construction site all while learning about safety and spatial relationships and how to think logically. "Geared" for ages 5 to 9. (CD-ROM)

Discovery Channel Multimedia, , , , , 800-678-3343.



Jump Start First Grade Jump Start Second Grade

\$35

\$35

13 different activities teach numbers and letters, time, colors, and simple sentences in JS First Grade(ages 5-7). The Second Grade program has 22 activities teaching math skills, reading, music, US geography and the solar system (ages 6-8). Both programs generate reports and allow you to chart a child's progress. Some difficulty levels can be adjusted. (CD-ROM)

Knowledge Adventure,1311 Grand Central, Glendale, CA, , 818-542-4200,800-542-4240.

<http://www.adventure.com>



Kid Works Deluxe

\$50

Learn word processing with a talking word processor. Kids can insert drawings, add stickers, and story starters then print out their work. There is even an online feature set. Takes time to master. Ages 4-9 (CD-ROM)

Davidson & Associates, Inc,19840 Pioneer Ave, Torrance, CA, , 310-793-0600,800-545-7677.

<http://www.dawd.com>



Read, Write & Type

\$60

Kids explore a keyboard learning letter sounds, letter combinations and typing in the process. Press a key and a related event is revealed. Lots of games and exercises, plus record keeping. Ages 6-8. (CD-ROM)

The Learning Company, , , , , 800-852-2255.

<http://www.learningco.com>



Grammar Rock

\$29

A tough subject to make engaging, but Grammar Rock succeeds with nine videos on which a variety of multi-level activities provide practice for concepts presented. Correct answers get kids into arcade games and teach some math skills as a bonus. Ages 6 to 10. (CD-ROM)

Creative Wonders, , , , , 800-543-9778.



Lamb Chop Loves Music

\$35

Let's kids explore a variety of musical instruments via an interactive journey with the Musicians of Bremen. 50 different instruments a rendered. A number of challenging activities make this a great way to introduce children to music. Ages 3-8 (CD-ROM)

Philips Media Software, , , , , 310-444-6500, .



Infinity City

\$25

Explore counting, shapes and sizes while riding with a singing Taxi Driver. Dozens of activity modules, puzzles and stories add to the fun. Ages 4-8. (CD-ROM)

Headbone Interactive, , , , , 206-325-3885,800-267-4709.

<http://www.headbone.com>

General Interest



KidDesk Kid Desk Family Edition

**\$27
\$55**

Designed by early childhood experts, KidDesk gives kids creative control over their computing environment without putting parents' or teachers' data at risk. Adults select the programs that will appear on KidDesk from those installed on the hard drive. Through simple mouse clicks, even young children can launch their own software programs and learn real-life skills playing with KidDesk accessories. Accessories include a working calculator, a phone message machine, a talking clock, and a printable calendar. Children can choose any of six theme desktops such as Dinosaur, Executive, and Circus Desks. No reading or computer skills are required. Kid Desk is for Kids aged 3-10; Family Edition is for all ages. (Disk)

Edmark Corp., 6727 185th Ave. NE, PO Box 3218, Redmond, WA, 98073, 206-556-8484, .
<http://www.edmark.com>



Peter and the Wolf

\$25

Serge Prokofiev's story and music, the narration of Jack Lemmon and many captivating, original illustrations are combined to offer children a truly unforgettable storybook experience. Featuring original music performed by the Prague Festival Orchestra, Peter and the Wolf is a multimedia storybook children will want to listen to, read, and enjoy over and over again.

Ebook, Inc., 32970 Alvarado-Niles Rd. #704, Union City, CA, 94587, 510-429-1331, .



African Trail ; Amazon Trail; Explore Yellowstone Oregon Trail; Yukon Trail; Maya Quest

\$25 to \$50

In Amazon Trail adventurers travel through a time warp to explore the Amazon River and learn about the rain forest while searching for an elusive medicinal plant. An Inca king has sent a jaguar in a dream to bring him the cure for his people; to find the plant and accomplish the mission, adventurers must talk with travelers from different eras. In African Trail, you relive a record-setting bicycle expedition across the continent. The other "Trail" titles are worth considering as well, including Amazon Trail II, Oregon Trail, Oregon Trail II, the Yukon Trail, and MayaQuest: The Mystery Trail, and Explore Yellowstone. Many are available on CD-ROM or Diskette and are for ages 10 and up.

MECC, 6160 Summit Dr. N, Minneapolis, MN, 55430, 612-569-1500, 800-685-6322.



The Cruncher

\$60

The Cruncher is a talking, animated spreadsheet targeted at ages 10 and up. The Cruncher teaches spreadsheet skills using real-world examples such as party planning, family budgeting, and calendar making. Features include a "talking feature" that reads aloud; animated clip art with sound effects for use with spreadsheets; charts and graphs; and a "notebook" associated with each spreadsheet to keep detailed information relevant to that spreadsheet. Ages 10 and up (Disk or CD-ROM)

Davidson & Associates, Inc., 19840 Pioneer Ave, Torrance, CA, 90503, 310-793-0600, 800-545-7677.
<http://www.davd.com>



Carmen Sandiego Deluxe Carmen Sandiego Junior Detective

**\$47
\$40**

It's a really great game series for kids (and adults). Historically and geographically educational, yet fun, with graphics, color, and sound effects. The Junior Detective game is designed for younger kids (ages 5 to 8). Other recommended titles include Where in the World is Carmen Sandiego, Where in the USA is Carmen Sandiego and Where in Space is Carmen Sandiego.

Broderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.
<http://www.broderbund.com>



World Discovery Deluxe

\$40

A great way to learn geography with this well designed series of map-based games. Even the sound is good quality. Ages 8 and up. (CD-ROM)

Great Wave Software, 5353 Scotts Valley Drive, Scotts Valley, CA, , 408-438-1990, 800-423-1144.
<http://www.greatwave.com>



Mavis Beacon Teaches Typing 4.0 **Mavis Beacon Teaches Typing for Kids**

\$35
\$20

Ok, who really wants to learn to type?? But it's a critical skill these days. Make it as painless as possible with Mavis Beacon. The main program features good lessons and games, plus effective feedback on monitoring. The "kids" version does not require reading skills.

Mindscape, 60 Leveroni Court, Novato, CA, 94949, 415-883-3000, 800-234-3088.
<http://www.mindscape.com>



A.D.A.M.the Inside Story, 1997 Ed.

\$35

Peel back the skin on parts of the body to reveal layer after layer of the human anatomy. Tour the heart in 3-D and travel through the lungs. A.D.A.M. now has an internet link for updates. Ages 11 and up. (CD-ROM)

A.D.A.M. Software, Inc., , , , , 800-755-2326.
<http://www.adam.com>



Alge-Blaster

\$35

Algebra Fun?! If you are defending the planet Quadratica it can be. Only by solving algebraic equations and translating word problems can the planet be saved. It will even chart your progress. Ages 12 and up. (CD-ROM)

Davidson & Associates, , , , , 800-545-7677.
<http://www.davd.com>



Ancient Lands

\$50

Hundreds of interactive stories about Ancient Rome, Greece and Egypt that delve into everything from myths and stories to wars and politics. Some stories are narrated and animated. Ages 9 and up (CD-ROM)

Microsoft Corp, , , , , 800-376-5125.
<http://www.microsoft.com>



Exploring the Lost Maya

\$40

Based on Robert Sharer's book, The Ancient Maya, this CD-ROM examines the ancient culture and history with time lines, maps and a wealth of pictures and movies. A fun way to explore archaeological digs. Ages 11 and up.

Sumeria, , , , , 415-904-0800, .



Eyewitness Encyclopedia series **Eyewitness Virtual Reality Series**

\$35
\$25

An impressive variety of titles and subjects. The Encyclopedia series looks at science, or astronomy or biology. The Virtual Reality series examines birds, dinosaurs or life in the jungle. There is also an Eyewitness History of the World. In each a child can explore, play games or even test how much they have learned. A nice set of programs.

DK Multimedia, 95 Madison Avenue, New York, NY, 10016, , 800-356-6575.
<http://www.dk.com>



Her Heritage

\$45

A 1000+ entry biographical encyclopedia of famous American women, including photos, film and newsreel clips. Ages 10 and up. (CD-ROM)

Cambrix Publishing, , , , , 818-992-8781, .



Incredible Machine 3 **Incredible Toon Machine**

\$28
\$40

Incredible Machine 3 is a giant construction kit with dozens of parts, ramps, levers, pulleys and more. There are film shorts about some of the working parts, plus music. Toon Machine is a similar product that uses cartoon-like parts. Ages 8 and up (CD-ROM)

Sierra On-Line, , , , , 800-757-7707.
<http://www.sierra.com>



Masterpiece Mansion

\$35

You are locked in an art museum and the only way to escape is to solve puzzle about art, artists and cultures from ancient Greece to the 20th Century. Program contains 150 famous art pieces and 40 different games. Ages 12 and up (CD-ROM)

Philips, , , , 310-444-6500, .



Romeo and Juliet: Center Stage

\$79

Shakespeare? Romeo and Juliet: Center Stage is designed to get beyond the initial resistance with this almost 90 minute version acted by teens. The script and play can be watched at the same time. A good way to get into Shakespeare. Ages 14 and up. (CD-ROM)

Sunburst Communications, Inc, , , , , 800-321-7511.

<http://www.nysunburst.com>



The Lost Mind of Dr. Brain

\$40

A superb product. So much fun, with beautiful graphics and music, a multitude of puzzles and wacky humor, kids wo'nt care if they are learning about logic, music, spatial reasoning, and even chemistry and physics. Ages 12 and up. (CD-ROM)

Sierra On-Line, , , , , 800-757-7707.

<http://www.sierra.com>

Middle Grades



Kid Pix Studio The New Kid Pix

**\$40
\$35**

One of the few programs likely to attract youngsters away from video games. The tools have sound effects; the alphabet is in both English and Spanish; and there's even a "small kids" mode. This is a must-have if your kids are 3 to 12, and you have a color Mac. Kid Pix Studio gives you lots of rubber stamps, hidden pictures, sounds, Color Me pictures, and Wacky TV (QuickTime). Oh, and it does kid-style presentations with a storyboard that makes truck sounds when you rearrange tiles! (CD-ROM). The New Kid Pix combines Kid Pix, Kid Pix 2 and Kid Pix Companion, all on floppy disks, for the same age group. (Disk)

Brøderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.

<http://www.broderbund.com>



Creative Writer Fine Artist

**\$30
\$30**

An exhausting amount of possibilities. Puts you in "Imaginopolis," where you create banners, newsletters, greeting cards, and stories. Combines fonts, pictures, story starters, and a lot of the traditional writing program approaches. For ages 8-14 (CD-ROM). Creative Writer & Fine Artist Bundle saves money at \$50.

Microsoft Corp, One Microsoft Way, Redmond, WA, 98052-6399, 206-882-8080, .

<http://www.microsoft.com>



Adi's Comprehensive Learning System

\$45

Lots of activities for kids in 6 programs covering English, math and science in theater, lab and other settings. Can even create animations. Progress reports are built in. Ages 7-11 (CD-ROM)

Sierra On-Line, , , , , 800-757-7707.

<http://www.sierra.com>



Crystal Rain Forest

\$45

Incorporate geometry, math, and even LOGO programming (an easy-to-use version) into a child's journey to protect the planet. Nice learning tool. Ages 8-13.

Terrapin Software, Inc., , , , , 800-972-8200.



Pop Sci for Kids: Ocean Voyager

\$40

While exploring the oceans in a submarine returning a seal to its home, kids learn about marine life, the ecology, and navigation. Ages 6-13 (CD-ROM)

Times Mirror Multimedia, , , , , 800-747-1787.



Logical Journey of the Zoombinis Math Workshop; Tabletop, Jr.

**\$50
\$40/\$70**

A nice set of math and logic development tools. With Zoombinis (ages 8-12) logic and problem solving skills are stressed as kids classify little animals to advance to a new land. Puzzles vary in difficulty. (CD-ROM). Math Workshop (ages 6-12) offers games that incorporate drill and practice as children progress from one level to the next (CD-ROM). Tabletop Jr for ages 5-23 focuses on math, graphing and logical thinking, menus are in English and Spanish (Disk). All excellent programs.

Brøderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.
<http://www.broderbund.com>



Reading Galaxy The Amazing Writing Machine

**\$42
\$42**

Reading Galaxy (ages 9-15) uses a game show format to help children learn about literature. Puzzle solving and passage reading are part of the fun. The writing machine combines KidPix drawing tools with writing to create poems, letters, diaries and journals. It's complete with rhyming dictionary, spell checker and guides to four different styles of poetry (ages 6-12). (CD-ROM)

Brøderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.
<http://www.broderbund.com>



Strategy Games of the World

\$35

Beat strategy masters at their own game and develop your logical skills in the process. Great fun. Ages 8-14. (CD-ROM)

Edmark Corp., 6727 - 185th Avenue, NE, Redmond, WA, 98073, 206-556-8484, 800-426-0856.
<http://www.edmark.com>



Imagination Express series

\$29

Visit the rain forest, or the oceans, or the pyramids, or take a trip in time. In the process you create scenes, then add a story, music, animation and dialog for a full story that is different every time you play, plus you learn about the places you visit. Ages 5-14. (CD-ROM)

Edmark Corp., 6727 - 185th Avenue, NE, Redmond, WA, 98073, 206-556-8484, 800-426-0856.
<http://www.edmark.com>



SimTown

\$35

A kids version of SimCity2000 (ages 8-12) introduces children to planning, population and development issues, all while playing a very fun game. (CD-ROM)

Maxis, 2 Theatre Square, Orinda, CA, 94603, 510-254-9700, 800-336-2947.
<http://www.maxis.com>



What's the Secret: Volume 2

\$33

Based on the PBS program "Newton's Apple" children explore various science topics with suggestions as to relevant experiments. Ages 7-13 (CD-ROM)

3M Learning Software, , , , , 800-219-9022.

Preschool and Kindergarten



Millie's Math House; Trudy's Time and Place House Bailey's Book House; Sammy's Science House

**\$28
\$28**

Designed and developed by Berkeley Learning Technologies around the preschool math curriculum of California for ages 3-6, Millie has won several awards. Six activities teach numbers, patterning, sorting, and shape and size recognition—each activity allows for playing and learning, too. Color, black & white, sound input, a parent mode that gives info about the goals of each activity, and a special mode for disabled kids lacking hand/eye coordination. It never, ever tells you that you blew it—very cool! Bailey's Book house emphasizes letter recognition, rhymes, self-expression and story telling. Sammy's Science House looks at weather, logic puzzles and classifying animals. Trudy explores the abstract world of time and place. (CD-ROM or Disks)

Edmark Corp., 6727 - 185th Avenue, NE, Redmond, WA, 98073, 206-556-8484, 800-426-0856.
<http://www.edmark.com>



The Playroom

\$40

Designed for 3- to 6-year olds, The Playroom teaches counting, letter recognition, telling time, spelling, reading and math readiness, creativity, and more. Point and click on just about anything in The Playroom, and something fun will happen. (CD-ROM)

Brøderbund Software, Inc., 500 Redwood Blvd., PO Box 6125, Novato, CA, 94948-6125, 415-382-4400, 800-521-6263.
<http://www.broderbund.com>



Jump Start Preschool Jump Start Kindergarten

**\$35
\$35**

A great new series (5 so far) of early-learning software. Preschool focuses on letters, shapes, colors and numbers while Kindergarten looks at clocks, patterns, sentences and numbers. Each is filled with activities, games and progress reports. Each should entertain and teach for quite some time. (CD-ROM)

Knowledge Adventure, 1311 Grand Central, Glendale, CA, , 818-542-4200, 800-542-4240.
<http://www.adventure.com>



Alphabet Express

\$28

Great product for home or school. It features letter recognition and lots of alphabet activities, including letter sounds. Connect-the-dot, maze and hidden letter games keep children engaged. Many activity pages can be printed. 3-6 year olds. (CD-ROM)

School Zone Publishing Company, , , , , 800-253-0564.
<http://www.schoolzone.com>



Playskool Puzzles

\$40

Encourage logical thinking, creativity and language use skills with Playskool Puzzles. A wide variety of puzzles, connect-the-dots, mix and match puzzles are provided at three challenge levels. There are even puzzle making tools. 3-6 year olds. (CD-ROM)

Playskool Software, , , , , 800-638-6927.



Early Math Beginning Reading

**\$30
\$35**

Playing Early math, kids solve puzzles, feed fish and develop skills in counting, adding, patterns and shapes. Beginning reading has kids reading stories and learning the alphabet and how syllables sound. Ages 4-7. (CD-ROM or Disk)

Sierra On-Line, , , , , 800-757-7707.
<http://www.sierra.com>

MULTIMEDIA AUTHORING



HyperCard 2.3.5

\$90

The basic engine behind most current CD-ROMs. The newer version 2.3 adds Power Mac native code and enhanced color support and scripting commands. While not exactly high-level, it does many jobs that other development engines just can't compare with as far as simplicity and accessibility. Offers stand-alone application capability and inexpensive distribution.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.

<http://www.hypercardapple.com>



Macromedia Director 5

\$800

A powerful animation and authoring tool for creating high-quality multimedia presentations, animations, and interactive applications. Its interface makes use of Lingo commands. The latest version allows Mac users to create productions for other platforms, and with Shockwave (included) add multimedia effects to Web pages. Currently Director supports Netscape 2.0 Plus and plans support for other browsers.

Macromedia, 600 Townsend St., San Francisco, CA, 94103, 415-252-2000, .

<http://www.macromedia.com>

MULTIMEDIA EXPLORATION



Voyager II v2.0

\$100

You can view the stars as the Egyptian pyramid builders saw them thousands of years ago or see the pattern the sun makes in the sky during its annual migration. Stand on a nearby star, watch the orbits of the planets, and see Halley's Comet pass by. The tools and precision in this program are good enough for professionals. A truly amazing product developed by zealots, with love. Entertaining enough to keep in your games folder, the new version has color, sky pictures, and a bigger astral database. The CD-ROM version adds the 19-million-star Hubble Guide Star Catalog and a collection of almost 800 astronomical pictures. Available on Diskette or CD-ROM.

Carina Software, 12919 Alcosta Blvd., Suite 7, San Ramon, CA, 94583, 510-355-1266, .



Think for Yourself (CD)

\$149

A collection of statistics from the United Nations, World Health Organization, and other American governmental sources, with an easy-to-use Discovery data analysis program. The information includes data on AIDS, the environment, health, and American demographics. The Discovery application "understands" the information contained in the data sets, and lets even young kids analyze and solve problems.

PEMD Education Group, 35000 Highway 128, Cloverdale, CA, 95425-0039, 707-894-3668, .



Xplora 1: Peter Gabriel's Secret World

\$45

A stunning CD-ROM from Peter Gabriel with over 100 minutes of video, 30 minutes of audio, 100 still images, tons of text, videos of the songs (and conversations with the directors), a sampling of the WOMAD music festival (and 40 different world music albums), behind the scenes at the Grammys, and more. You can even create your own mix of "Digging in the Dirt."

MacPlay (division of Interplay Productions, inc), 17922 Fitch Ave, Irvine, CA, 92714-6038, , 800-428-8200.

<http://www.macplay.com>



American Visions (CD-ROM)

\$60

Presents over 210 works of art in 24-bit color, representing 140 American artists. Videos, photographs, and narrative about the artists and their work, with narration by the collector.

Eden Interactive, 1022 Natoma St. #2, SF, CA, 94103, 415-241-1450, 800-743-3360.



The Residents' Freak Show The Residents' Bad Day on the Midway

**\$28
\$45**

Discover fetishes, fantasies, rituals, and tragic secrets through photos, comics, music, music videos, and animation. Featuring spectacular animation design by Jim Ludtke, Freak Show is a new audio-visual experience encompassing the future of interactive stories, music videos, and digital art. Their latest, "bad Day" adds a twist: you pop in and out of the minds of the randomly encountered characters at an unpleasant midway. Just try to avoid a nasty accident. You'll need a lot of computing power to fully enjoy these fascinating but resource-demanding interactive CD-ROMs.

The Voyager Company, 578 Broadway #406, New York, NY, 10012, 212-431-5199, 800-446-2001.
<http://www.voyagerco.com>



Star Trek the Next Generation: Interactive Technical Manual

\$50

The "Official Starfleet Virtual Tour," this CD-ROM is an absolute must-have for any Next Generation fan. It includes the first full implementation of QuickTime VR, which means that you can get a 360-degree view of your surroundings from any of multiple locations on the Enterprise. An incredible amount of information and detail. Brilliant.

Simon & Schuster Interactive, 1230 Avenue of the Americas, New York, NY, 10020, .



Seven Days in August

\$14

An interactive documentary that recalls the week of August 13th to 19th, 1961 and the construction of the Berlin Wall. Features slide shows, four hours of audio, two hours of narrated photomontage, and two interactive games—all recapturing what life was like for both Americans and Berliners during that historic week.

Time Warner Interactive, 2210 W. Olive Ave, Burbank, CA, 91506, 818-955-9999, 800-593-6334.
<http://www.pathfinder.com/twi>



From Alice To Ocean: Alone Across The Outback

\$45

A photo journalistic essay of Robyn Davidson's seven-month-long trek across the Australian outback. Appeals to both adults and children by offering insights into Australian geography and culture, along with an inspirational story about a journey against all odds. It's an interactive multimedia CD-ROM with a coffee table-style book of photographs by internationally recognized photographer Rick Smolan.

Claris Corp., 5201 Patrick Henry Dr., PO Box 58168, Santa Clara, CA, 95052-8168, 408-987-7000 Customer Relations, 800-325-2747 U.S. Dealers.
<http://www.claris.com>



Oceans Below

\$28

Oceans Below is a CD-ROM edutainment title that explores the world of scuba diving. Users can select from dive sites around the world and experience the exotic undersea world of manta rays, angel fish, coral walls, and shipwrecks. Includes more than 200 video clips—more than one hour's worth—and features marine life, plant life, and undersea sites.

Software Toolworks, 60 Leveroni Ct., Novato, CA, 94949, 415-883-3000, 800-234-3088.



Passage to Vietnam (Book and CD-ROM)

\$70 (\$36 CD only)

Rick Smolan, the man who brought us From Alice to Ocean a few years ago, was part of the first officially sanctioned tour of Vietnam in 20 years. This book and CD-ROM combo shows photos by many of the world's top photojournalists, along with notes about daily life in Vietnam and lessons on photography. Combined with an excellent multimedia control, it makes the most out of QuickTime on a CD-ROM. This is where the future of these discs is headed, folks. Watch out, though, since many of the books are being sold without the disc. The disk can be purchased separately for around \$40.

Against All Odds, PO Box 1189, Sausalito, CA, 94966, 415-331-6300, .



Macbeth

\$35

A beautiful version of Shakespeare's Macbeth, with annotated text; QuickTime clips of the Roman Polanski, Orson Welles, and Akira Kurosawa film version; maps of Shakespeare's England (and Scotland); and more. Makes a wonderful gift, although by the time you get home, you'll probably decide to give it to yourself!

The Voyager Company, 578 Broadway #406, New York, NY, 10012, 212-431-5199, 800-446-2001.
<http://www.voyagerco.com>



Cinemanian '97

\$29

Despite annoying interface problems (hey, it's Microsoft), Cinemanian is the CD-ROM movie guide. It contains over 24,000 listings, including movies, stills, sounds, clips, cast lists, filmographies, biographies, Leonard Matlin reviews, Pauline Kael reviews, Roger Ebert reviews, Baseline (a film encyclopedia) reviews, and more—and it's pretty zippy. It's the best movie guide out on the market. Very very cool.

Microsoft Corp., One Microsoft Way, Redmond, WA, 98052-6399, 206-882-8080, .
<http://www.microsoft.com>



Mayo Clinic Family Health Book

\$80

Filled with information and advice about everything from preventive medicine to drug side effects this is a great resource for any family, especially since kids seem to create emergency situations on a regular basis. It now includes links with health related web sites via Netscape.

IVI Publishing, 7500 Flying Cloud Drive, Minneapolis, MN, 55344, 612-996-6000, 800-754-1484.
<http://www.ivi.com>



Real World Picture Atlas The Cities Below

\$40

\$40

Great satellite images of the world overlaid or underlaid with maps of the areas viewed. Disks include useful information about the world your exploring. The interface is especially well designed.

Now What Software, 2303 Sacramento Street, San Francisco, CA, 94115, 415-885-1689, 800-322-1954.



Monty Python's Complete Waste of Time

\$45

That's what we like: truth in advertising. Will you become more productive singing "I'm a lumberjack and that's ok?" No. Will "naughty bits" make you the life of the party? Not likely. But if you like that Python humor and those great graphics (nudge, nudge), you can't help but enjoy this complete waste of time.

7th Level, , , , 214-498-8184, 800-884-8863-ext. 77.



Volcanos: Life on the Edge

\$40

Follow photographer Roger Russmeyer as he goes from one erupting volcano to another, all while capturing a bit of the danger he faced to get the shots. There is plenty of supplemental information to keep any vulcanologist engrossed.

Corbis Publishing, , , , 206-641-4505, 800-246-2065.
<http://www.corbis.com>



Robert Winter's Crazy for Ragtime

\$35

Examine the syncopated music that is ragtime. View performances, folios of sheet music and create your of "rag" by creating variations on existing compositions. Great fun.

Calliope Media, , , , 310-829-1100, 800-336-2947.



A Passion for Art: Renoir, Cézanne, Matisse and Dr. Barnes

\$40

Explore Dr. Barnes' gallery of almost 70 artists. Click on paintings to learn more about the subject and the painter, or take a guided tour.

Corbis Publishing, , , , 206-641-4505, .
<http://www.corbis.com>



Microsoft Bookshelf

\$55

A nicely integrated set of reference sources including dictionary, almanac, quotations dictionary, chronology, atlas and more. It's individual units aren't the equal of a stand alone package, but there is no better combination package. Good for students.

Microsoft, , , , 206-882-8080, 800-426-9400.
<http://www.microsoft.com>



Red Shift 2

Fantastic interactive space simulator for diving through the rings of Saturn or climbing on board a satellite. Plenty of options for setting the controls and visiting any place you like in the solar system.

Maris Multimedia, , , , 415-492-2819, .
<http://www.maris.com>



Beyond the Wall

\$24

Visit the Vietnam Memorial via your computer. This CD-ROM tells the history of the memorial and the stories of some of the names found there. Objects are all around you in your 3-D trip, and each tells its own story. Well done.

20th Century Fox Home Entertainment, , , , 310-369-3900, .
<http://www.tcfe.com>



Western Garden

\$50

If you live in the western states, and love to garden, you already know about the Sunset Western Garden Book, the bible of western gardening. The CD version makes that wealth of information much easier to access. Well designed sorting functions make it a breeze to pick the right ground cover for your sunny sloping hillside in your particular climate zone.

Sunset New Media, 80 Willow Road, Menlo Park, CA, 94025, 415-321-3600, 800-634-3095.

NUMBER CRUNCHING



DeltaGraph 4.0.1

\$135

As statistical packages become more versatile and business presentations by computer more common, the demand for sophisticated graphing programs is stronger than ever. Spreadsheets like Microsoft Excel have impressive graphing modules, but no program offers a wider range of charts than DeltaGraph. It has dozens of chart types (some unique), PostScript, import/export, slide show effects, warm links with Excel, and free tech support. It's the best value for presentation and general charting. This latest version sports a revamped interface, better speed, hot links to Excel 5.0 files, broken axis support and about 70 chart types, 200 chart styles, and support for AppleScript. It is System 7.5-savvy, and Power Mac native. Save by checking competitive upgrade pricing before you buy.

DeltaPoint Inc., 2 Harris Ct., Ste. B-1, Monterey, CA, 93940, 408-648-4000, 800-446-6955.
<http://www.deltapoint.com>



Microsoft Excel 5.0a

\$295

Excel is universally acknowledged as the best spreadsheet for the Mac and/or Windows. Both versions share a single manual, but that's less of a bother than it would seem. This product is easier to learn and use, and more feature-packed for the power user than the competition. But watch out, Excel is a major resource hog, requiring tons of RAM and loads of hard drive space. If you are not a power spreadsheet user, take a look at ClarisWorks. If you already own an earlier version of Excel, you may also want to forego the upgrade to 5.0.

Microsoft Corp, One Microsoft Way, Redmond, WA, 98052-6399, 206-882-8080, .
<http://www.microsoft.com>



ClarisWorks 4.0v4

\$120

For those with modest spreadsheet needs, or limited memory and disk space, ClarisWorks is an excellent choice. Though an integrated package, its spreadsheet module is robust, yet compact. For more information see "Integrated Packages."

Claris Corp, 5201 Patrick Henry Dr., PO Box 58168, Santa Clara, CA, 95052-8168, 408-987-7000 (customer relations), 800-325-2747 (U.S. dealers).
<http://www.claris.com>

OCR



OmniPage Professional 7.0

\$490

OmniPage has always been among the fastest and most accurate of the OCR packages. Currently, its expert tools make it the clear choice for power users. The Preview window allows you to zoom in and check the brightness settings. Multiple zones per page can be selected and specified for different content. AccuPage can process tinted or shaded pages. There is a training mode for non-standard characters. The after-processing view is actually a full-featured word processor with a spell checker, and there is a separate module for editing grayscale images. 3-D OCR permits viewing the depth of character pixels and multiple zones allowing zone templates to be saved and reused. The latest version boasts better accuracy, and it's accessible from any program. It's expensive, but it does everything you are likely to want. If you already own a competitor's product, you may be able to purchase this program for as little as \$150.

Caere Corp., 100 Cooper Ct., Los Gatos, CA, 95030, 408-395-7000, 800-736-5735.
<http://www.caere.com>



TextBridge 3.0

\$75

In the past, if you wanted to do OCR your only choice was to spend \$500 on a program like OmniPage, or pay less for software that was either feature-poor or error-prone. Now, with TextBridge Mac, anyone can afford high-quality OCR. TextBridge Mac is among the most accurate OCR programs and even does a good job with faxes—the bane of any OCR program. It can even handle graphics with features like a TIFF Queue that can process multiple images into a single document. It supports the TWAIN standard and is PowerPC native. Unless you are into heavy-duty OCR, TextBridge Mac can't be beat for price and performance. TextBridgePro is pricier, costing about as much as an OmniPage Pro upgrade. The latter is the better value.

Xerox Imaging Systems, Inc., 9 Centennial Dr., Peabody, MA, 01960, 508-977-2000, 800-248-6550.
<http://www.xerox.com>

ONLINE



ZTerm 1.0.1

\$30 (Shareware)

ZTerm is a versatile telecom program that features XModem, YModem, and ZModem file transfers; VT100 terminal emulation; ANSI screen control; and a scrollbar buffer. This version also allows some simple scripting. Comprehensive docs are included in a separate file. Even though it's Shareware, it outshines many commercial offerings, and the price can't be beat. Despite its non-GUI appearance, it remains the good choice for connecting with a remote site. Available on BMUG's Telecom A1 disk for \$4, and on Planet BMUG.

David P. Alverson, 5635 Cross Creek Ct., Mason, OH, 45040, . .



Newsatcher 2.13

Freeware

It is easy to let your web browser do all the work when you log onto the internet. Alas, they just don't do all things well. If you want to check or post online news, this is a great tool. Another gift to the community from John Norstad (developer of Disinfectant). It does not support reading the news offline however.

John Norstad, Northwestern University,



Eudora Light 3.0.1

Freeware

Getting email of the net is relatively painless with Eudora. The Freeware version is fine for most folks. If you need more heavy duty email software, consider Eudora Pro or Claris eMailer.

Qualcomm, , 619-597-5113, 800-238-3672.
<http://www.qualcomm.com>



Anarchie 2.0.1

\$10 (Shareware)

Internet browsers also do not do a great job of searching for and retrieving files off the net. This is where a program like Anarchie shines. Browse FTP sites, upload or download files, or find them using Anarchie. It requires System 7 and MacTCP 1.1 or later. System 7.5 and MacTCP 2.0.6 or later are both highly recommended. This version is Open Transport compatible, has fixed support for non-standard FTP ports and displays more progress information. It also has a great list of anonymous FTP sites.

Peter N. Lewis, Stairways Software,
support@stairways.com.au



Internet Config 1.1

Freeware

Make your internet life easier. With Internet Config you only have to enter your email address once and your information gets placed in the preferences of most of your internet applications automatically. by reducing the number of times which you need to enter your Internet preferences into the various preferences dialogs of all your Internet applications. Common preferences can just as easily be edited. Some programs must be modified to take advantage of the program however.

Late Night Silly Software, , , , , .
internet-config@share.com



Transparency 1.0

Freeware

If you want to use transparent GIF images on your Web page, this simple utility is just what you need. It sets the transparency index. Just drag a GIF onto the Transparency icon and the image opens up against a grey background ready for you color and customize.

Aaron Giles, , , , , .
giles@med.cornell.edu



NetDoubler 1.0

\$65

Every LAN manager and network user gets frustrated with slow network transfers. One way to improve the situation is to install the NetDoubler control panel on all Macs on your network where it goes to work transparently to boost your network by almost double on small to medium size files. There is less improvement with large files. Works with any card, not just Asanté's. It is bundled with their FastEthernet cards. OpenTransport 1.0.8 or later required.

Asanté Technologies, 821 Fox Lane, San Jose, CA, 95131, 408-435-8388, 800-662-9686.
<http://www.asante.com>



FreePPP 2.5v2

Freeware

Great little program for easy connctions between your Mac and the internet via phone lines avoiding the usual network connections
The FreePPP Group, , , , , .



Future Splash Animator

\$240

In the fast changing world of the Web, designing unique pages that grab the eye becomes more and more daunting. Enter FutureSplash Animator. It will enable you to create great graphics and animation, and create it with incredible ease. No sound support, but otherwise pretty impressive.

Future Wave Software, , , , , 619-552-7680, .
<http://www.futurewave.com>

Network Utilities



Nok Nok 2.0 Nok Nok A/S AppleShare Server

\$50
\$159

System 7's file sharing abilities are really nice, but security could stand a lot of improvement. Nok Nok fills this gap by telling you who's logging in, and from where. You can limit how long they can share, and it allows you to keep a log of who's been on and when. Features include file sharing performance adjustment, PlainTalk support (it'll announce the name of the person accessing your machine), and LookOut! (a utility that reveals server access privileges in the Chooser).

The AG Group, Inc, 2540 Camino Diablo #200, Walnut Creek, CA, 94596, 510-937-7900, 800-466-2447.
<http://www.aggroup.com>



Apple Remote Access 2.1 Apple Remote Access 2.1 Client

\$189
\$59

This utility has changed the way people do business. It's an enabling bit of software that's easy to use. If you need remote access to your computer or network (for file sharing, email, or running your database remotely), this is the product. Attempts have been made to do this, using hardware and software combinations, but they were cumbersome and slow. ARA installs easily, works simply, and features security and speed. After connecting, your remote volumes and printers become available on your local machine. The latest upgrade offers support for ISDN and high speed modems (28.8 Kbps/V.34), an expanded set of scripts and are Open Transport compatible.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://www.apple.com>



ShareDevil

ZiffWare (free)

This utility is "ZiffWare" by the late Robert Hess used to be called "Shaman." It's an easy way to control file sharing. A must for people who are worried about who's logged into their computer over the local network. It is available on ZiffNet and services which carry it. If you really appreciate Mr. Hess' efforts, his family asked that donations be sent to DQ (Digital Queens) in San Francisco.

Ziff-Davis Publishing Co., 50 Beale St, San Francisco, CA, 94105, 415-547-8300, .
<http://zdnet.com>

OPERATING SYSTEM



Macintosh System 7.6

\$65

Apple's latest system software update adds increased performance (especially when you use Virtual Memory), improved updating and installation, and a new interface on the Extensions Manager. See the related article in the Features section of the Spring 1997 issue of the BMUG Newsletter for more on this release and what models it runs on.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://www.info.apple.com/swupdates>



SimpleText 1.3.1

Appleware (Free)

SimpleText replaces Apple's venerable, but basic text program, TeachText. Its features are limited; there are no formatting options and no Undo function, but you can select fonts and add styling to your text. It supports drag-and-drop and Speech Manager making it pretty impressive for such a compact and versatile program. But our favorite enhancement is that you can have two text files open at one time, something TeachText never allowed. This alone makes it worth upgrading. SimpleText works fine with earlier versions of System 7. Version 1.3 supports PICT file, QuickTime movie, QuickDraw GX PDDs, and QuickDraw 3-D model viewing.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://www.apple.com>



LaserWriter 8.4.1

Appleware (Free)

This latest version of Apple's PostScript printer driver adds desktop printer icons and various interface enhancements to other recent additions such as QuickDraw GX's Desktop Printer function allowing you to select and organize or background printing in the Finder...all without the overhead of QuickDraw GX! If you print to a PostScript printer, you'll want this cool driver. PPD selection makes sure of compatibilities with custom features of any printer.

Apple Computer, 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-776-2333.
<http://www.apple.com>



SimpleText Color Menu 2.1

Freeware

This handy little SimpleText enhancement installs a color menu, adds find and replace capabilities, word count and more, making Apple's little word processor much more useful. Requires SimpleText version 1.1 or later.

Alessandro Levi Montalcini, C.so Re Umberto 10, 10121 Torino, Italy, , , .
LMontalcini@pmn.it

PAINTING

**Painter 4****\$360**

The best textural painting software there is for the Mac. This powerful program handles multiple floating selections, a gradient composer to create color ramps and gradients, a wealth of painting tools and effects, and multimedia tools. A new mosaic feature allows cloning or painting with tiles. You can even apply Painter's tools to QuickTime movies frame by frame. If you've got a pressure-sensitive tablet, this is the way to go, hands down (or is that pens down?).

Fractal Design Corp., 335 Spreckels Dr., Ste. F, Aptos, CA, 95003, 408-688-8800, 800-647-7443.
<http://fractal.com>

**Dabbler 2.04****\$45**

This inexpensive product from the programming masters that brought us Painter and Sketcher has exceptional features. Designed for basic Mac users, it offers ease of use and compatibility with many types of Macs. Users can have fun creating natural-looking art—from finger painting to impressionistic oil painting in 16-bit color. The "tracing paper" option helps assure accurate animation. For best results, use a pressure-sensitive tablet like the WACOM; do not use a mouse.

Fractal Design Corp., 335 Spreckels Dr., Ste. F, Aptos, CA, 95003, 408-688-8800, 800-647-7443.
<http://fractal.com>

PERSONAL INFORMATION MANAGEMENT

**Now Up-to-Date & Contact 3.6****\$70**

Together at last, the latest version formally bundles these two well integrated products. They are the best way to organize information about your friends, clients and associates. They are both fast and the Reminder and QuickContact menus are unusually clever and well implemented. The consistent look and feel is a real bonus. A free form comments area adds flexibility and QuickPad lets you instantly enter a note or message into the program. Another nice feature is the ability to access phone numbers or events from the menu bar without starting the application. Now Up-to-Date is richly customizable, with more features than any other time manager on the market, and fully networkable, too! The new version supports drag and drop from WEB pages, improves printing support and is PowerPC native.

Now Software, Inc., 921 SW Washington St. #500, Portland, OR, 97205, 503-274-2800, 800-275-1669.
<http://www.nowsoft.com>

**Reunion 4.0****\$100**

For personal record keeping that takes you back to your roots, there is no genealogy software that beats Reunion. It is powerful, easy to use, and you can't beat the charts. You can even put in a picture of Aunt Minnie or Uncle Ned. Information is easily added, and you can customize fields. It's much faster now that the latest version is no longer HyperCard based; reason alone for users of older versions to upgrade. As with all genealogy programs there are limitations; non-traditional Western European relationships don't easily fit. So if you have ancestors in San Francisco or Utah...

Leister Productions, PO Box 289, Mechanicsburg, PA, 17055, 717-697-1378, .
<http://www.LeisterPro.com>

**InfoGenie 2****\$55**

A fast and easy way to store any personal information you may have. InfoGenie is an unstructured free form database. You can define fields or not as you choose. You can keep track of your data in your own way. It also prints envelopes and labels, and dials the phone. You might call it the 7.5 successor to SuperQuickDex

Casady & Greene, 22734 Portola Drive, Salinas, CA, 93908, 408-484-9228, 800-359-4920.
<http://www.casadyg.com>

**Gene 4.1****\$15 (Shareware)**

For the person just starting out with their family tree, try Gene. Its information fields are pretty basic, but it creates nice charts and keeps everyone connected. The data can also be exported into Reunion if you ever want to move up.

Diana Eppstein, 8 Owen Court, Irvine, CA, 92715, ., .



AreaCodeFinder 4.2

\$15 (Shareware)

With the number of area codes soaring it's hard to keep track of what prefixes you need to punch. AreaCodeFinder helps by identifying locations within an area code and area codes for specific locations. Plus it's updatable. But what will happen if some areas are assigned two area codes?

John J. Calande III, 1438 South 8th Street, Philadelphia, PA, 19147, 215-551-0918, .
jjciii@aol.com

PLUG-INS AND EXTENSIONS



Kai's Power Tools 3.02

\$125

A set of over 30 powerful generators and filter plug-ins for Adobe Photoshop, Fractal Design Painter, and other programs that use plug-in technology. The interface alone makes this program an essential part of any self-respecting artist's software toolbox. New features include KPT Lens F/X for exploring filter enhancements in real time, a spheroid designer, and an Interform to mix textures precisely. Be sure to get your version updated with the latest maintenance patch.

MetaTools, 6303 Carpenteria Av, Carpenteria, CA, 93013, 805-566-6200, 800-472-9025.
<http://www.metatools.com>



Eye Candy 3.0

\$90

Lean and clean filtering machine for Photoshop. Creates lighting effects, including drop shadows, reflections and bevels. The 20 filters can also be previewed. Very cool package.

Alien Skin Software, 800 St. Mary's St., Ste. 100, Raleigh, NC, 27605-1457, 919-832-4124, .
<http://www.alienskin.com/alienskin>



Andromeda Filters (Series 1 through 4)

\$80 to \$100

An impressive series of Photoshop filters. Each element of the series has a separate focus: photography (optical lens effects), 3D effects (projections onto shapes), screens (line conversion and alternative halftone patterns), and textures. The 2nd and 3rd programs in the series are especially strong.

Andromeda Software, , , , 805-379-4109, .
<http://andromeda.com>



KPT Convolver 1.0

\$125

Use convolver to custom design blurring, edge-detection, focus and color embossing. A one-trick pony that is very good at its trick.

MetaTools, 6303 Carpenteria Av, Carpenteria, CA, 93013, 805-566-6200, 800-472-9025.
<http://www.metatools.com>



TypeCaster 1.0

\$125

Adds fully rendered 3-D characters to any Photoshop image. Many positioning and rendering options, although no custom kerning is supported. Lighting and texture controls are included.

MetaTools, 6303 Carpenteria Av, Carpenteria, CA, 93013, 805-566-6200, 800-472-9025.
<http://www.metatools.com>

PRESENTATION



Persuasion 4.0

\$245

Persuasion is the product of choice for slide and screen business and educational presentations. A new set of palettes was added with version 3, permitting improved control over text and color. Its impressive library of templates and chart styles was also enhanced. Persuasion supports importing of data from a variety of other programs. The interface is much friendlier but still has a steep learning curve. This powerful program remains the choice of the pros for its ability to create graphs and manipulate images. Version 4 includes web publishing capabilities and better integration with other Adobe products.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-685-3505.
<http://www.adobe.com>



Pro View 1.3

\$70

If your presentation needs are fairly basic, Pro View lets you can avoid the time and money needed to buy and master Persuasion. The interface is simple and straightforward and has excellent drag and drop support. You can blend text, graphics, QuickTime sounds video and sounds, and create self running slide shows. A self-contained viewer lets you distribute your slide shows to anyone. There is no path animation and transition tools are limited. But overall, it packs a lot in an simple, inexpensive package.

E-magine, 2472 Broadway, Suite 391, New York, NY, 10025, , 800-603-1474.
<http://www.e-magine.com>

PROGRAMMING



Metrowerks CodeWarrior Gold 10

\$330

CodeWarrior is becoming the programming environment of choice for development on the Macintosh. Compiles for both the 680x0 and Apple's new Power Macs (in native mode). Codewarrior supports development for the Mac, MagicCap and Windows, and adds Java and BeOS support as well. The latest version improves the IDE-graphical browser view and the external editor and includes a Java toolkit.

Metrowerks, Inc., The Trimex Bldg., Rte. 11, Mooers, NY, 12958, 514-747-5999, 800-247-6553.
<http://www.metrowerks.com>

PUBLISHING



PageMaker 6.5

\$550

Our choice for the premier page-layout application. Many would argue for QuarkXPress, but Quark's tech support, interface quirks, corporate policies, and code-stability leave too much to be desired. PageMaker has long been the follower in the feature race, but Adobe's implementation far exceeds the rest of the market in ease of use, technical support, and customer service. Pagemaker supports multiple master pages, fast object grouping, masking, Photoshop plug-ins, auto-trapping, auto Acrobat PDF file creation, and complete HTML exporting. While these are major advancements we are still looking forward to a complete Adobe-style "Quark-killer". Version 6.5 improves layers and HTML conversions and adds tabbed palettes (perhaps too many of them) and support for plug-ins. But its frame-based layout options still need work.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-422-3623.
<http://www.adobe.com>



Acrobat 3.0 Acrobat Reader 3.0

**\$200
Freeware**

The vision of Adobe to produce an electronic document-exchange file format, free of platform and font limitations, while carrying all the detail and complexities of PostScript is further refined with version 3. The Acrobat Portable Document Format (PDF) lets you transport documents to and from any Mac, DOS, Windows, or UNIX application—and environment. Electronic documents are easy to produce and edit with any program that outputs PostScript. Take raw PostScript code and compile Acrobat PDF files, embedding fonts and EPS graphics for perfect translation to any screen. Fully Power Mac native. The Acrobat Reader 3.0, is freely distributable and fits on one HD disk (and now includes a complete and Power Mac version of ATM!). This latest version integrates with major web browsers and does full dithering of text.

Adobe Systems, Inc., 345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-272-3623.
<http://www.adobe.com>

RENDERING AND 3-D



Alias Sketch! 2.02

\$560

A free-form 3-D illustration and design application that provides all the benefits of working in 3-D: shape creation and manipulation; the ability to view objects from any perspective; and automatic calculation of real-world lighting, shadows, reflections, and textures. Very cool.

Alias Research, Inc., 110 Richmond St. E, Toronto, Ontario, M5C 1P1, Canada, 416-362-9181, 800-447-2542.
<http://www.alias.com>



Adobe Dimensions 2.0

\$128

The easy way to take your PostScript drawings from 2-D to 3-D. Lets you revolve paths around an axis, extrude, map 2-D or 3-D objects onto any curved surface, and combine shapes to make more complex objects. Another excellent Adobe product.

Adobe Systems, Inc. 3,345 Park Avenue, San Jose, CA, 95110-2704, 408-536-6000, 800-649-3875.

<http://www.adobe.com>



KPT Bryce 2.0

\$170

The landscape rendering program used to create the Fall '94 Newsletter cover. Spectacular landscapes, dozens of preset skies, grounds, and terrains which can be combined in countless ways. It took forever to render (until we got the Power Mac native version!), but the results were worth it. Another incredible package from Kai and MetaTools.

MetaTools, 6303 Carpenteria Av, Carpenteria, CA, 93013, 805-566-6200, 800-472-9025.

<http://www.metatools.com>



StudioPro Blitz 1.75+

\$900

While the ranks of three-dimensional players have swelled since Strata Vision 3D first came on the scene, Strata is still one of the few to offer a complete modeling, rendering, and animation environment. A new more-intuitive interface expands the studio-quality Animation System with extensions that include Shatter, Atomize, and Explode. Native Power Mac acceleration speeds up the photo-realistic rendering algorithms. A PowerMac is required and QuickDraw 3D is supported. StudioPro Version 2 is scheduled for release in early 1997.

Strata Inc., 2 W. Saint George Blvd., Ste 2100, St. George, UT, 84770, 801-628-5218, 800-869-6855

<http://www.strata3d.com>



Poser 2

\$100

This amazing and inexpensive new product renders human figures making it easy to incorporate photo quality models in infinite variety. The figures are easy to manipulate into realistic positions and to render using custom color and bump maps. Check out the cover of this Newsletter to get an idea of what we mean.

Fractal Design, 335 Spreckels Dr., Ste. F, Aptos, CA, 95003, 408-688-8800, 800-647-7443.

<http://www.fractal.com>



Infini-D 3.5

\$450

For beginning 3-D artists, Infini-D is a good choice. It integrates modeling, rendering and animation into a relatively easy to use interface. While it is not a true Boolean modeler it does incorporate functionality that provides a good approximation of such effects. New features in this upgrade include SuperFlare lens flaring effects and Shadow Catcher to control a shadow's transparency. Speed of certain effects has also been improved.

Specular, 7 Pomeroy Lane, Andover, MA, 01002, 413-253-3100, 800-433-7332.

<http://www.specular.com>



LogoMotion 2.0.1

\$100

For 3-D type design LogoMotion lets you animate type. The new interface and enhanced rendering abilities set this upgrade apart. A good, fast choice for the new and intermediate user.

Specular, 7 Pomeroy Lane, Andover, MA, 01002, 413-253-3100, 800-433-7332.

<http://www.specular.com>

SCRIPTING



The Tao of AppleScript, 2nd Edition

\$25

Straight from the depths of BMUG, the best AppleScript book on the market for learning how to script. Does that sound biased? It probably is, but that doesn't mean it isn't true. This book is designed to introduce programming to the intermediate computer user and anyone interested in AppleScript. Comes with AppleScript 1.1.

BMUG, Inc., 1442A Walnut St., #62, Berkeley, CA, 94709-1496, 510-549-2684, 800-776-2684.
<http://www.bmug.org>



AppleScript 1.1

Appleware (Free)

With the invention of Apple Events way back with System 7 everyone waited years for Apple to make a simple scripting engine to drive them for the non-programmer. Well Apple finally did complete this overdue project, and now you can magically create automated tasks like taking this very writing from the database that it is created and organized in to laying it out in PageMaker—without lifting a finger. For more information on what you can do with AppleScript and to get AppleScript itself check out BMUG's own publication, The Tao of AppleScript, published by Hayden Books.

Apple Computer Inc., 1 Infinite Loop, Cupertino, CA, 95014, 408-996-1010, 800-767-2775 .
<http://www.applescript.apple.com>



QuicKeys 3.5

\$95

QuicKeys is a great macro creator that lets you automate how you use your computer—and it works with applications that don't support AppleScript. Separate shortcuts can be created for specific programs, or applied to every file in a folder. Why should you type the same things over and over again, when QuicKeys can do it for you? The latest version greatly improves the interface but is not PowerPC native and some of the buttons are hard to identify.

CE Software, Inc., PO Box 65580, West Des Moines, IA, 50265, 515-221-1801, 800-523-7638.
<http://www.esoft.com>



Typelt4Me 4.5.1

\$30 (Shareware)

Super tool for converting your abbreviations to text while you type. You can even tell it to correct your common typos like "hte" to "the". But keep your eyes open, there are a few bugs to look out for.

Riccardo Ettore, , , , , ,

WORD PROCESSING



ClarisWorks 4.0v4

\$120

This latest version adds a major new capability putting it in league with the big guys—paragraph styles. Incorporating the outline function into the paragraph styles you can now create very large and complex documents easily and powerfully. It has the additional advantage of being very compact, making it ideal for PowerBooks. For a more complete description, see "Integrated Packages."

Claris Corp., 5201 Patrick Henry Dr., PO Box 58168, Santa Clara, CA, 95052-8168, 408-987-7000 (customer relations), 800-325-2747 (U.S. dealers).
<http://www.claris.com>



WordPerfect 3.5.2 (Disks or CD-ROM)

\$80

Version 3.5 is about as good as it gets in Mac word processing with a highly customizable interface, button bars and tool ribbons galore. The macro language has power similar to that found in MS Excel. Text boxes allow you to do WYSIWYG page layout. Don't forget the HTML editing capabilities, if you want to use a word processor for that. All this for about the lowest price in the market. The principal drawback is that the great WordPerfect development team was dissolved during the three way passoff that took the product from WordPerfect to Novell to Corel. Corel has announced version 4.0 should be out shortly. We'll know more when we've seen it. In the meantime, keep an eye on the Corel web site (www.corel.com).

Corel Corp., 1600 Carling Avenue, Ottawa, Ontario, K1Z8R7, 613-728-8200, 800-772-6735.
<http://www.wordperfect.com>



Nisus Writer 5 (Disk or CD-ROM)

\$144

Another excellent upgrade for Nisus. New features include easily added "live objects", HTML Export, Quickdraw GX printing and unlimited undo's. Nisus Writer also features multiple clipboards; support for multiple languages within the same document; windows that can be tiled or stacked and split horizontally and vertically; synchronized scrolling; line numbers; and invisible characters. Search and Replace includes a pattern-matching facility that allows users to specify a literal or more general search pattern. Text will wrap around graphics, and graphics can be pasted into text as characters. It has a steeper learning curve than many other programs, but its power and speed make it worth the effort. Some language (not US English) versions require hardware copy protection.

Nisus Software, Inc., PO Box 1300, Solana Beach, CA, 92075, 619-481-1477, 800-922-2993.
<http://www.nisus-soft.com>

Envelopes



Bar Code Pro 3.08

\$200

A clean and simple-to-use bar code creation tool that kicks out PICT or EPS graphics files. UPCE, Postnet/FIM, Code 39 (a personal favorite!), Pharmacode, etc. The images can be placed directly into page layout programs like QuarkXPress and PageMaker or your Word Processor. Over 40 symbologies and variations are included. The latest version is PowerPC native and comes with PANTONE and Color Check.

Synex, 692 10th St., Brooklyn, NY, 11215, 718-499-6293, 800-447-9639.
<http://www.snx.com>

Text Editors



BBEdit 4.0.2 BBEdit Lite 4.0

**\$79
Freeware**

BBEdit was originally a Freeware text editor, but by "popular demand" it has gone commercial. Anyone looking for a great text editor for web pages programming, or anything else, should get BBEdit. It supports project files of the THINK languages and CodeWarrior; works with ToolServer; and has a built-in browser, and lots of other neat things. Best of all, with the latest version BBEdit has become a premier tool for creating and revising Web pages with excellent HTML editing features!

Bare Bones Software, P.O. Box 108, Bedford, MA, 01730-0108, 509-651-3561, .
<http://www.barebones.com>

Word Processing Accessories



EndNote Plus 2.2 EndLink 2.0

**\$180
\$60**

Keeping track of your references is always a problem, whether you are preparing a book, professional article, or term paper for school. EndNote Plus, a powerful database that knows all about bibliographic references and styles, almost makes writing term papers fun. It automatically generates a correctly formatted bibliography and footnotes for your paper. There is a slick plug-in module that works in Word, and a new Japanese localized version. EndLink enables you to transfer bibliographic references from online and academic services directly into your personal bibliographic database. A major time-saver for online researchers.

Niles and Associates, 800 Jones St., Berkeley, CA, 94710, 510-559-8592, .
<http://www.niles.com>



American Heritage Talking Dictionary 4.0 (CD-ROM)

\$40

The American Heritage Dictionary is fast, has 200,000 referenced words (including usage notes, geographical names, and famous people), a thesaurus with over 500,000 words, and a Dictionary of Cultural Literacy with tens of thousands of listings. The definitions are word-for-word identical to the paper edition, minus the illustrations. It has great search capabilities, including anagrams, alternate spellings (chiefly British), wild cards, and WordHunter, which can do Boolean searches. The new version offers better compatibility, access to definitions without leaving your word processing program and wild card searches. But it is big, 14 Megs on your Hard Disk without the talking part.

SoftKey International, One Athenaeum Street, Cambridge, MA, 02142, 617-494-1200, 800-227-5609.
<http://www.softkey.com>



Working Watermarker v 1.0.11

\$36

This extension lets you place a "watermark" on any document you print. Design your own pattern or watermark. Add "Draft," "For Your Eyes Only," a logo, "Do Not Copy," or whatever you please. Control the process from your normal Print dialog box, where you can control which pages get watermarked, what message to print (you paste in a graphic), and how dark to print the watermark. Simple, yet impressive.

Working Software, Inc., PO Box 1844, Santa Cruz, CA, 95061-1844, 408-423-5696, 800-229-9675.
<http://www.working.com>



MacEnvelopes Pro MacEnvelopes 5.2

\$179
\$60

Printing envelopes is usually an awful chore. MacEnvelopes 5.2 makes it much easier. It works with any printer, massive amounts of records, and any customized layout a user wants; it will even print graphics and postal bar codes. If you want to integrate professional list management, envelope and label graphic design, and printing in one fast package, check out MacEnvelopes Pro. Synex has released a Shareware version of this product, MacEnvelope Lite v 1.0. The Shareware fee is \$25

Synex, 692 10th St., Brooklyn, NY, 11215, 718-499-6293, 800-447-9639.
<http://www.snx.com>

THE BMUG NEWSLETTER

FALL 1997 • VOLUME XIII, NO. 2

BMUG is the largest Macintosh Users Group in the world, with more than 10,000 current members in over 60 countries. Welcome to the family!

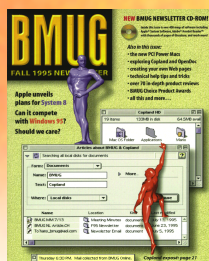
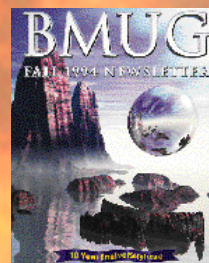
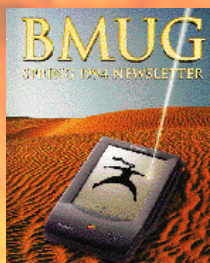
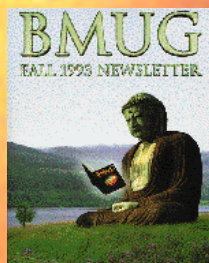
This is the BMUG Newsletter, the last word in honest reviews, commentary and cutting edge technology. There are hundreds of pages of candid evaluations of books, hardware and software. It has a CD ROM containing software and directions on how to use our FirstClass BBSes, and a wide collection of utilities.

Since BMUG accepts no advertising, and all articles are written by our members, you can be sure that any bias is solely due to actual experience. *We're in the business of giving away information!*



Membership: The BMUG Newsletter is just one of the benefits of a BMUG membership. You can access our technical support Helpline (via fax, phone, or email) for information, reference and help. You can also enjoy a personal account on our Berkeley-based bulletin board, *Planet BMUG*, our Boston-based system, *BMUG Boston*, or our Toyko based system, *BMUG Japan*. All are accessible via the internet.

Back Issues: If you missed an issue of the BMUG Newsletter, don't worry! you can still get it! Each back issue costs only \$10 (\$7ea. + \$3 shipping & tax).



USA \$29.95

Canada \$41.00

BMUG, INC. 1442A Walnut Street #62 • Berkeley, CA 94709 USA •